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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

Only for new nonprovisional applications under 37 CFR 1.53(b)

Attorney Docket No. 38-21(15726)B

First Named Inventor or Application Identifier CONNER

Title Nucleic Acid Molecules and Other Molecules Associated
Plants

Express Mail Label No.

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. ☒ *Fee Transmittal Form (Form PTO-1082)
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 99]
(preferred arrangement set forth below)
- Descriptive title of the Invention
 - Cross References to Related Applications
 - Statement Regarding Fed sponsored R&D
 - Reference to Microfiche Appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claims
 - Abstract of the Disclosure
- ☐ Drawing(s) (35 USC 113) [Total Sheets]
- Oath or Declaration [Total Pages 6]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 17 completed)
[Note Box 5 below]
- i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named
in the prior application, see 37 CFR 1.63(d)(2) and
1.33(b)
5. ☐ Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy
of the oath or declaration is supplied under Box 4b, is considered
as being part of the disclosure of the accompanying application
and is hereby incorporated by reference therein.

6. ☐ Microfiche Computer Program (Appendix)
7. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)
- a. ☒ Computer Readable Copy
- b. ☒ Paper Copy (identical to computer copy)
- c. ☒ Statement verifying identity of above
copies

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(b) Statement ☐ Power of
(when there is an assignee) Attorney
10. ☐ English Translation Document (if applicable)
11. ☒ Information Disclosure ☒ Copies of IDS
Statement (IDS)/PTO-1449 Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503) (Two)
(should be specifically itemized)
14. ☐ *Small Entity ☐ Statement filed in
Statement(s) prior application,
Status still proper
and desired
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Other:

*NOTE FOR ITEMS 1 & 14: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY
FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF
ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28)

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No: /

Prior Application Information: Examiner:

Group/Art Unit:

18. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

or ☒ Correspondence address below

(Insert Customer No. or Attach bar code label here)

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Signature	Lawrence M. Lavin Jr.		Date	April 3, 2000	

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jc525 U.S. PTO
09/540234
04/03/00

Attorney Docket No. 38-21(15726)B

ASSISTANT COMMISSIONER FOR PATENTS
 Washington, DC 20231

Sir:

Transmitted herewith for filing is the patent application of

Inventors: Timothy W. CONNER *et al.*
 For: Nucleic Acid Molecules and Other Molecules Associated with Plants

Enclosed are:

- ☐ _____ sheets of informal drawings.
☐ An assignment of the invention to _____
☐ Form PTO-1595.
☐ A certified copy of a _____ application.
☐ A verified statement to establish small entity status under 37 C.F.R. § 1.9 and 37 C.F.R. § 1.27.
☒ Executed Combined Declaration and Power of Attorney for Patent Application (6 total pages).

The filing fee has been calculated as shown below:

		(Col. 1)	(Col. 2)	SMALL ENTITY		OR	OTHER THAN A SMALL ENTITY	
FOR		NO. FILED	NO. EXTRA	RATE	FEE		RATE	FEE
BASIC FEE					345.00	OR		690.00
TOTAL CLAIMS	10 - 20 = *		0	x 9 =		OR	x 18 =	0.00
INDEP. CLAIMS	3 - 3 = *		0	x 39 =		OR	x 78 =	0.00
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENTED				+ 130 =		OR	+ 260 =	
If the difference in Col. 1 is less than zero, enter "0" in Col. 2				TOTAL	\$	OR	TOTAL	\$ 690.00

- ☒ Please charge my Deposit Account No. 13-4125 in the amount of \$690.00. A duplicate copy of this sheet is attached.
- ☐ Check No. _____ in the amount of \$ _____ to cover the filing fee is enclosed.
- ☒ The U.S. Patent and Trademark Office is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 13-4125 referencing docket number 38-21(15746)B.
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- ☒ Any additional filing fees required under 37 C.F.R. § 1.16.
☒ Any patent application processing fees under 37 C.F.R. § 1.17.
- ☐ The U.S. Patent and Trademark Office is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to Deposit Account No. 13-4125 referencing docket number _____.
 A duplicate copy of this sheet is attached.
- ☐ Any patent application processing fees under 37 C.F.R. § 1.17.
☐ The issue fee set in 37 C.F.R. § 1.18 at or before mailing of the Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b).
☐ Any filing fees under 37 C.F.R. § 1.16 for presentation of extra claims.

Date: April 3, 2000

Lawrence M. Lavin, Jr.
 Lawrence M. Lavin, Jr. (Reg. No. 30,768)

by Rd R. Marsh 41,408

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April 3, 2000

Assistant Commissioner for Patents
Washington, D.C. 20231

Box Patent Application

Re: U.S. Non-Provisional Utility Patent Application
Application No.: To Be Assigned
Filed: Herewith
For: **Nucleic Acid Molecules and Other Molecules
Associated with Plants**
Inventors: Timothy W. CONNER *et al.*
Atty. Docket: 38-21(15726)B

Sir:

The following documents are forwarded herewith for appropriate action by the U.S.
Patent and Trademark Office:

1. Utility Patent Application Transmittal (PTO/SB/05);
2. Form PTO-1082 (in duplicate);
3. U.S. Utility Patent Application entitled:

Nucleic Acid Molecules and Other Molecules Associated with Plants

and naming as inventors:

Timothy W. CONNER and James D. MASUCCI,

the application consisting of:

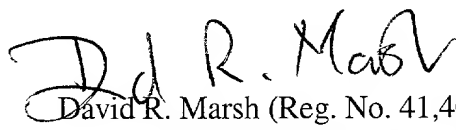
- a. A specification containing:
 - (i) 96 pages of a description prior to the claims;
 - (ii) 2 pages of claims (10 claims);
 - (iii) a one (1) page abstract; and
 - (iv) 5,271 pages of a sequence listing;

4. Statement Regarding Sequence Submission;
5. A CD-ROM containing the sequence listing;
6. Original Declaration and Power of Attorney, executed by inventor Timothy W. Conner (3 pages);
7. Original Declaration and Power of Attorney, executed by inventor James D. Masucci (3 pages);
8. An Information Disclosure Statement;
9. Form PTO-1449 (1 page), with 8 accompanying documents; and
10. Two (2) return postcards.

It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be stamped with the filing date and unofficial application number and returned as soon as possible.

In accordance with 37 C.F.R. § 1.821(f), the paper copy of the sequence listing and the computer readable copy of the sequence listing submitted herewith in the above application are the same.

Respectfully submitted,



David R. Marsh (Reg. No. 41,408)

Timothy W. Riffe (Reg. No. 43,881)

Enclosures

NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH PLANTS

5

Field of the Invention

The present invention is in the field of plant biochemistry. More specifically the invention relates to nucleic acid molecules that encode proteins and fragments of proteins produced in plant cells, in particular, wheat plants. The invention also relates to proteins and fragments of proteins so encoded and antibodies capable of binding the proteins. The invention also relates to methods of using the nucleic acid molecules, proteins and fragments of proteins.

Background of the Invention

I. EXPRESSED SEQUENCE TAG NUCLEIC ACID MOLECULES

Expressed sequence tags, or ESTs, are short sequences of randomly selected clones from a cDNA (or complementary DNA) library which are representative of the cDNA inserts of these randomly selected clones. McCombie, *et al.*, *Nature Genetics*, 1:124-130 (1992); Kurata, *et al.*, *Nature Genetics*, 8: 365-372 (1994); Okubo, *et al.*, *Nature Genetics*, 2: 173-179 (1992), all of which references are incorporated herein in their entirety.

Using conventional methodologies, cDNA libraries can be constructed from the mRNA (messenger RNA) of a given tissue or organism using poly dT primers and reverse transcriptase (Efstratiadis, *et al.*, *Cell* 7:279-288 (1976), the entirety of which is herein incorporated by reference; Higuchi, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 73:3146-3150 (1976), the entirety of which is herein incorporated by reference; Maniatis, *et al.*, *Cell* 8:163 (1976) the entirety of which is herein incorporated by reference; Land, *et al.*, *Nucleic Acids Res.* 9:2251-2266 (1981), the entirety of which is herein incorporated by

reference; Okayama, *et al.*, *Mol. Cell. Biol.* 2:161-170 (1982), the entirety of which is herein incorporated by reference; Gubler, *et al.*, *Gene* 25:263 (1983), the entirety of which is herein incorporated by reference).

Several methods may be employed to obtain full-length cDNA constructs. For example, terminal transferase can be used to add homopolymeric tails of dC residues to the free 3' hydroxyl groups (Land, *et al.*, *Nucleic Acids Res.* 9:2251-2266 (1981), the entirety of which is herein incorporated by reference). This tail can then be hybridized by a poly dG oligo which can act as a primer for the synthesis of full length second strand cDNA. Okayama and Berg, report a method for obtaining full length cDNA constructs.

This method has been simplified by using synthetic primer-adapters that have both homopolymeric tails for priming the synthesis of the first and second strands and restriction sites for cloning into plasmids (Coleclough, *et al.*, *Gene* 34:305-314 (1985), the entirety of which is herein incorporated by reference) and bacteriophage vectors (Krawinkel, *et al.*, *Nucleic Acids Res.* 14:1913 (1986), the entirety of which is herein incorporated by reference; and Han, *et al.*, *Nucleic Acids Res.* 15:6304 (1987), the entirety of which is herein incorporated by reference).

These strategies have been coupled with additional strategies for isolating rare mRNA populations. For example, a typical mammalian cell contains between 10,000 and 30,000 different mRNA sequences. Davidson, *Gene Activity in Early Development*, 2nd ed., Academic Press, New York (1976). The number of clones required to achieve a given probability that a low-abundance mRNA will be present in a cDNA library is $N = (\ln(1-P))/(\ln(1-1/n))$ where N is the number of clones required, P is the probability desired, and 1/n is the fractional proportion of the total mRNA that is represented by a single rare mRNA. (Sambrook, *et al.*, *Molecular Cloning: A Laboratory Manual*, 2nd ed., Cold Spring Harbor Laboratory Press (1989), the entirety of which is herein incorporated by reference.).

A method to enrich preparations of mRNA for sequences of interest is to fractionate by size. One such method is to fractionate by electrophoresis through an agarose gel (Pennica, *et al.*, *Nature* 301:214-221 (1983), the entirety of which is herein incorporated by reference). Another such method employs sucrose gradient centrifugation in the presence of an agent, such as methylmercuric hydroxide, that denatures secondary structure in RNA (Schweinfest, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 79:4997-5000 (1982), the entirety of which is herein incorporated by reference).

A frequently adopted method is to construct equalized or normalized cDNA libraries (Ko, *Nucleic Acids Res.* 18:5705-5711 (1990), the entirety of which is herein incorporated by reference; Patanjali, S. R. *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:1943-1947 (1991), the entirety of which is herein incorporated by reference). Typically, the cDNA population is normalized by subtractive hybridization. Schmid, *et al.*, *J. Neurochem.* 48:307-312 (1987) the entirety of which is herein incorporated by reference; Fargnoli, *et al.*, *Anal. Biochem.* 187:364-373 (1990) the entirety of which is herein incorporated by reference; Travis, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:1696-1700 (1988) the entirety of which is herein incorporated by reference; Kato, *Eur. J. Neurosci.* 2:704 (1990); and Schweinfest, *et al.*, *Genet. Anal. Tech. Appl.* 7:64 (1990), the entirety of which is herein incorporated by reference). Subtraction represents another method for reducing the population of certain sequences in the cDNA library. Swaroop, *et al.*, *Nucleic Acids Res.* 19:1954 (1991), the entirety of which is herein incorporated by reference).

ESTs can be sequenced by a number of methods. Two basic methods may be used for DNA sequencing, the chain termination method of Sanger *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 74: 5463-5467 (1977), the entirety of which is herein incorporated by reference and the chemical degradation method of Maxam and Gilbert, *Proc. Nat. Acad. Sci. (U.S.A.)* 74: 560-564 (1977), the entirety of which is herein incorporated by reference. Automation and advances in technology such as the replacement of

radioisotopes with fluorescence-based sequencing have reduced the effort required to sequence DNA (Craxton, *Methods*, 2: 20-26 (1991), the entirety of which is herein incorporated by reference; Ju *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 92: 4347-4351 (1995), the entirety of which is herein incorporated by reference; Tabor and Richardson, *Proc.*

5 *Natl. Acad. Sci. (U.S.A.)* 92: 6339-6343 (1995), the entirety of which is herein incorporated by reference). Automated sequencers are available from, for example, Pharmacia Biotech, Inc., Piscataway, New Jersey (Pharmacia ALF), LI-COR, Inc., Lincoln, Nebraska (LI-COR 4,000) and Millipore, Bedford, Massachusetts (Millipore BaseStation).

10 In addition, advances in capillary gel electrophoresis have also reduced the effort required to sequence DNA and such advances provide a rapid high resolution approach for sequencing DNA samples (Swerdlow and Gesteland, *Nucleic Acids Res.* 18:1415-1419 (1990); Smith, *Nature* 349:812-813 (1991); Luckey *et al.*, *Methods Enzymol.* 218:154-172 (1993); Lu *et al.*, *J. Chromatog. A.* 680:497-501 (1994); Carson *et al.*, *Anal.*
15 *Chem.* 65:3219-3226 (1993); Huang *et al.*, *Anal. Chem.* 64:2149-2154 (1992); Kheterpal *et al.*, *Electrophoresis* 17:1852-1859 (1996); Quesada and Zhang, *Electrophoresis* 17:1841-1851 (1996); Baba, *Yakugaku Zasshi* 117:265-281 (1997), all of which are herein incorporated by reference in their entirety).

ESTs longer than 150 bases have been found to be useful for similarity searches
20 and mapping. (Adams, *et al.*, *Science* 252:1651-1656 (1991), herein incorporated by reference.) EST sequences normally range from 150-450 bases. This is the length of sequence information that is routinely and reliably generated using single run sequence data. Typically, only single run sequence data is obtained from the cDNA library, Adams, *et al.*, *Science* 252:1651-1656 (1991). Automated single run sequencing
25 typically results in an approximately 2-3% error or base ambiguity rate. (Boguski, *et al.*, *Nature Genetics*, 4:332-333 (1993), the entirety of which is herein incorporated by reference).

EST databases have been constructed or partially constructed from, for example, *C. elegans* (McCombie, *et al.*, *Nature Genetics* 1:124-131 (1992), human liver cell line HepG2 (Okubo, *et al.*, *Nature Genetics* 2:173-179 (1992)), human brain RNA (Adams, *et al.*, *Science* 252:1651-1656 (1991); Adams, *et al.*, *Nature* 355:632-635 (1992)),

5 *Arabidopsis*, (Newman, *et al.*, *Plant Physiol.* 106:1241-1255 (1994)); and rice (Kurata, *et al.*, *Nature Genetics* 8:365-372 (1994).

II. SEQUENCE COMPARISONS

A characteristic feature of a protein or DNA sequence is that it can be compared with other known protein or DNA sequences. Sequence comparisons can be undertaken

10 by determining the similarity of the test or query sequence with sequences in publicly available or propriety databases ("similarity analysis") or by searching for certain motifs ("intrinsic sequence analysis")(e.g. *cis* elements)(Coulson, *Trends in Biotechnology*, 12: 76-80 (1994), the entirety of which is herein incorporated by reference; Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997), the entirety of which is herein incorporated by

15 reference).

Similarity analysis includes database search and alignment. Examples of public databases include the DNA Database of Japan (DDBJ)(<http://www.ddbj.nig.ac.jp/>); Genebank (<http://www.ncbi.nlm.nih.gov/web/Genbank/Index.html>); and the European Molecular Biology Laboratory Nucleic Acid Sequence Database (EMBL)

20 (http://www.ebi.ac.uk/ebi_docs/embl_db.html). A number of different search algorithms have been developed, one example of which are the suite of programs referred to as BLAST programs. There are five implementations of BLAST, three designed for nucleotide sequences queries (BLASTN, BLASTX, and TBLASTX) and two designed for protein sequence queries (BLASTP and TBLASTN) (Coulson, *Trends in*

25 *Biotechnology*, 12: 76-80 (1994); Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997)).

BLASTN takes a nucleotide sequence (the query sequence) and its reverse complement and searches them against a nucleotide sequence database. BLASTN was designed for speed, not maximum sensitivity, and may not find distantly related coding sequences. BLASTX takes a nucleotide sequence, translates it in three forward reading frames and three reverse complement reading frames, and then compares the six translations against a protein sequence database. BLASTX is useful for sensitive analysis of preliminary (single-pass) sequence data and is tolerant of sequencing errors (Gish and States, *Nature Genetics*, 3: 266-272 (1993), the entirety of which is herein incorporated by reference). BLASTN and BLASTX may be used in concert for analyzing EST data (Coulson, *Trends in Biotechnology*, 12: 76-80 (1994); Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997).

Given a coding nucleotide sequence and the protein it encodes, it is often preferable to use the protein as the query sequence to search a database because of the greatly increased sensitivity to detect more subtle relationships. This is due to the larger alphabet of proteins (20 amino acids) compared with the alphabet of nucleic acid sequences (4 bases), where it is far easier to obtain a match by chance. In addition, with nucleotide alignments, only a match (positive score) or a mismatch (negative score) is obtained, but with proteins, the presence of conservative amino acid substitutions can be taken into account. Here, a mismatch may yield a positive score if the non-identical residue has physical/chemical properties similar to the one it replaced. Various scoring matrices are used to supply the substitution scores of all possible amino acid pairs. A general purpose scoring system is the BLOSUM62 matrix (Henikoff and Henikoff, *Proteins*, 17: 49-61 (1993), the entirety of which is herein incorporated by reference), which is currently the default choice for BLAST programs. BLOSUM62 is tailored for alignments of moderately diverged sequences and thus may not yield the best results under all conditions. Altschul, *J. Mol. Biol.* 36: 290-300 (1993), the entirety of which is herein incorporated by reference, uses a combination of three matrices to cover all

contingencies. This may improve sensitivity, but at the expense of slower searches. In practice, a single BLOSUM62 matrix is often used but others (PAM40 and PAM250) may be attempted when additional analysis is necessary. Low PAM matrices are directed at detecting very strong but localized sequence similarities, whereas high PAM matrices are directed at detecting long but weak alignments between very distantly related sequences.

Homologues in other organisms are available that can be used for comparative sequence analysis. Multiple alignments are performed to study similarities and differences in a group of related sequences. CLUSTAL W is a multiple sequence alignment package available that performs progressive multiple sequence alignments based on the method of Feng and Doolittle, *J. Mol. Evol.* 25: 351-360 (1987), the entirety of which is herein incorporated by reference. Each pair of sequences is aligned and the distance between each pair is calculated; from this distance matrix, a guide tree is calculated, and all of the sequences are progressively aligned based on this tree. A feature of the program is its sensitivity to the effect of gaps on the alignment; gap penalties are varied to encourage the insertion of gaps in probable loop regions instead of in the middle of structured regions. Users can specify gap penalties, choose between a number of scoring matrices, or supply their own scoring matrix for both the pairwise alignments and the multiple alignments. CLUSTAL W for UNIX and VMS systems is available at: [ftp.ebi.ac.uk](ftp://ftp.ebi.ac.uk). Another program is MACAW (Schuler *et al.*, *Proteins, Struct. Func. Genet.* 9:180-190 (1991), the entirety of which is herein incorporated by reference, for which both Macintosh and Microsoft Windows versions are available. MACAW uses a graphical interface, provides a choice of several alignment algorithms, and is available by anonymous ftp at: [ncbi.nlm.nih.gov](ftp://ncbi.nlm.nih.gov) (directory/pub/macaw).

Sequence motifs are derived from multiple alignments and can be used to examine individual sequences or an entire database for subtle patterns. With motifs, it is sometimes possible to detect distant relationships that may not be demonstrable based on

comparisons of primary sequences alone. Currently, the largest collection of sequence motifs in the world is PROSITE (Bairoch and Bucher, *Nucleic Acid Research*, 22: 3583-3589 (1994), the entirety of which is herein incorporated by reference.) PROSITE may be accessed via either the ExPASy server on the World Wide Web or anonymous ftp site.

- 5 Many commercial sequence analysis packages also provide search programs that use PROSITE data.

A resource for searching protein motifs is the BLOCKS E-mail server developed by S. Henikoff, *Trends Biochem Sci.*, 18:267-268 (1993), the entirety of which is herein incorporated by reference; Henikoff and Henikoff, *Nucleic Acid Research*, 19:6565-6572
10 (1991), the entirety of which is herein incorporated by reference; Henikoff and Henikoff, *Proteins*, 17: 49-61 (1993). BLOCKS searches a protein or nucleotide sequence against a database of protein motifs or "blocks." Blocks are defined as short, ungapped multiple alignments that represent highly conserved protein patterns. The blocks themselves are derived from entries in PROSITE as well as other sources. Either a protein or nucleotide
15 query can be submitted to the BLOCKS server; if a nucleotide sequence is submitted, the sequence is translated in all six reading frames and motifs are sought in these conceptual translations. Once the search is completed, the server will return a ranked list of significant matches, along with an alignment of the query sequence to the matched BLOCKS entries.

- 20 Conserved protein domains can be represented by two-dimensional matrices, which measure either the frequency or probability of the occurrences of each amino acid residue and deletions or insertions in each position of the domain. This type of model, when used to search against protein databases, is sensitive and usually yields more accurate results than simple motif searches. Two popular implementations of this
25 approach are profile searches (such as GCG program ProfileSearch) and Hidden Markov Models (HMMs)(Krough *et al.*, *J. Mol. Biol.* 235:1501-1531 (1994); Eddy, *Current Opinion in Structural Biology* 6:361-365 (1996), both of which are herein incorporated

by reference in their entirety). In both cases, a large number of common protein domains have been converted into profiles, as present in the PROSITE library, or HMM models, as in the Pfam protein domain library (Sonnhammer *et al.*, *Proteins* 28:405-420 (1997), the entirety of which is herein incorporated by reference). Pfam contains more than 500

5 HMM models for enzymes, transcription factors, signal transduction molecules, and structural proteins. Protein databases can be queried with these profiles or HMM models, which will identify proteins containing the domain of interest. For example, HMMSW or HMMFS, two programs in a public domain package called HMMER (Sonnhammer *et al.*, *Proteins* 28:405-420 (1997)) can be used.

10 PROSITE and BLOCKS represent collected families of protein motifs. Thus, searching these databases entails submitting a single sequence to determine whether or not that sequence is similar to the members of an established family. Programs working in the opposite direction compare a collection of sequences with individual entries in the protein databases. An example of such a program is the Motif Search Tool, or MoST
 15 (Tatusov *et al. Proc. Natl. Acad. Sci.* 91: 12091-12095 (1994), the entirety of which is herein incorporated by reference.) On the basis of an aligned set of input sequences, a weight matrix is calculated by using one of four methods (selected by the user); a weight matrix is simply a representation, position by position in an alignment, of how likely a particular amino acid will appear. The calculated weight matrix is then used to search the
 20 databases. To increase sensitivity, newly found sequences are added to the original data set, the weight matrix is recalculated, and the search is performed again. This procedure continues until no new sequences are found.

Summary of the Invention

25 The present invention provides a substantially purified nucleic acid molecule that encodes a wheat protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 11840.

The present invention also provides one or more substantially purified nucleic acid molecules comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof.

5 The present invention also provides a substantially purified wheat protein or fragment thereof, wherein said wheat protein is encoded by a nucleic acid molecule that comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 11840.

10 The present invention further provides a substantially purified protein, peptide, or fragment thereof encoded by a nucleic acid sequence which specifically hybridizes to a nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO: 1 through SEQ ID NO:11840.

15 The present invention further provides a substantially purified antibody capable of specifically binding to a protein or fragment thereof encoded by a nucleic acid sequence which specifically hybridizes to a nucleic acid molecule having a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO:1 through SEQ ID NO:11840.

20 The present invention also provides a transformed plant transformed to contain a nucleic acid molecule which comprises: (A) an exogenous promoter region which functions in plant cells to cause the production of an mRNA molecule; which is linked to (B) a structural nucleic acid molecule, wherein said structural nucleic acid molecule comprises a nucleic acid molecule that encodes a protein, peptide, or fragment thereof which hybridizes to a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO:1 through SEQ ID NO:11840 expressed in an effective amount to produce a desirable agronomic effect; which is linked to (C) a 3' non-
25 translated sequence that functions in plant cells to cause the termination of transcription and the addition of polyadenylated ribonucleotides to the 3' end of the mRNA sequence.

The present invention also provides a transformed plant cell containing a nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof, wherein the transcribed strand of said nucleic acid is complementary to a nucleic acid molecule that encodes a protein or fragment thereof. The present invention also provides
 5 bacterial, viral, microbial, and plant cells comprising a nucleic acid molecule of the present invention

The present invention also provides a method of producing a plant containing one or more proteins encoded by sequences comprising SEQ ID NO:1 or complement thereof through SEQ ID NO:11840 or complements thereof, expressed in a sufficient amount
 10 and/or fashion to produce a desirable agronomic effect.

In accomplishing the foregoing, there is provided, in accordance with one aspect of the present invention, methods of producing genetically transformed plants, comprising the steps of:

- (a) inserting into the genome of a plant cell a recombinant, double-stranded
 15 DNA molecule comprising
 - (i) a promoter which functions in plant cells to cause the production of an RNA sequence,
 - (ii) a structural DNA sequence that causes the production of an RNA sequence which encodes a desired protein.
 - (iii) a 3' non-translated DNA sequence which functions in plant cells to
 20 cause the addition of polyadenylated nucleotides to the 3' end of RNA sequence; where the promoter is homologous or heterologous with respect to the coding sequence and adapted to cause sufficient expression of a protein in desired plant tissues to enhance the
 25 agronomic utility of a plant transformed with said gene.

- (b) obtaining a transformed plant cell with said nucleic acid molecule that encodes one or more proteins, wherein said nucleic acid molecule is transcribed and results in expression of said protein(s); and
- (c) regenerating from the transformed plant cell a genetically transformed plant

The present invention also encompasses differentiated plants, seeds, and progeny comprising said transformed plant cells and which exhibit novel properties of agronomic significance.

The present invention also provides a method of producing a plant containing reduced levels of a protein comprising: (A) transforming a plant cell with a nucleic acid molecule that encodes a protein, wherein said nucleic acid molecule is transcribed and results in co-suppression of endogenous protein synthesis activity, and (B) regenerating plants and producing subsequent progeny from the transformed plant.

The present invention also provides a method of determining an association between a polymorphism and a plant trait comprising: (A) hybridizing a nucleic acid molecule specific for a polymorphism to genetic material of a plant, wherein said nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof; and (B) calculating the degree of association between the polymorphism and the plant trait.

The present invention also provides a method of isolating a genetic region, or nucleic acid that encodes a protein or fragment thereof comprising: (A) incubating under conditions permitting nucleic acid hybridization: a marker nucleic acid molecule, preferably an EST, with a complementary nucleic acid molecule obtained from a plant cell or plant tissue; (B) permitting hybridization between said marker nucleic acid molecule, preferably an EST, and said complementary nucleic acid molecule obtained from said plant cell or plant tissue; and (C) isolating said complementary nucleic acid molecule.

The present invention also provides a method for determining a level or pattern in a plant cell of a protein in a plant comprising: (A) incubating, under conditions permitting nucleic acid hybridization, a marker nucleic acid molecule, the marker nucleic acid molecule selected from the group of marker nucleic acid molecules which

5 specifically hybridize to a nucleic acid molecule having the nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 11840 or complements thereof or fragments of either, with a complementary nucleic acid molecule obtained from the plant cell or plant tissue, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained
10 from the plant cell or plant tissue permits the detection of an mRNA for the enzyme; (B)

permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant cell or plant tissue; and (C) detecting the level or pattern of the complementary nucleic acid, wherein the detection of the complementary nucleic acid is predictive of the level or pattern of the protein.

15 The present invention also provides a method for determining the level or pattern of a protein in a plant cell or plant tissue comprising: (A) incubating under conditions permitting nucleic acid hybridization: a marker nucleic acid molecule, the marker nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 11840 or complements thereof, with a

20 complementary nucleic acid molecule obtained from a plant cell or plant tissue, wherein nucleic acid hybridization between the marker nucleic acid molecule, and the complementary nucleic acid molecule obtained from the plant cell or plant tissue permits the detection of said protein; (B) permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant cell
25 or plant tissue; and (C) detecting the level or pattern of the complementary nucleic acid, wherein the detection of said complementary nucleic acid is predictive of the level or pattern of the protein synthesis.

The present invention also provides a method for determining a level or pattern of a protein in a plant cell or plant tissue which comprises assaying the concentration of a molecule, whose concentration is dependent upon the expression of a gene, the gene having a nucleic acid sequence which specifically hybridizes to a protein marker nucleic acid molecule, the molecule being present in a plant cell or plant tissue, in comparison to the concentration of that molecule present in a plant cell or plant tissue with a known level or pattern of said protein, wherein an assayed concentration of the molecule is compared to the assayed concentration of the molecule in a plant cell or plant tissue with a known level or pattern of said protein.

The present invention also provides a method of determining a mutation in a plant whose presence is predictive of a mutation affecting a level or pattern of a protein comprising the steps: (A) incubating, under conditions permitting nucleic acid hybridization, a marker nucleic acid, the marker nucleic acid selected from the group of marker nucleic acid molecules which specifically hybridize to a nucleic acid molecule consisting of the nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 11840 or complements thereof or fragments of either and a complementary nucleic acid molecule obtained from the plant, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant permits the detection of a polymorphism whose presence is predictive of a mutation affecting the level or pattern of the protein in the plant; (B) permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant; and (C) detecting the presence of the polymorphism, wherein the detection of the polymorphism is predictive of the mutation.

The present invention also provides a method for determining a mutation in a plant whose presence is predictive of a mutation affecting the level or pattern of protein synthesis comprising the steps: (A) incubating under conditions permitting nucleic acid

hybridization: a marker nucleic acid molecule, the marker nucleic acid molecule comprising a nucleic acid molecule that is linked to gene, the gene having a nucleic acid sequence which specifically hybridizes to a sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:11840 and complements thereof, and a
 5 complementary nucleic acid molecule obtained from a plant tissue or plant cell of the plant, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant permits the detection of a polymorphism whose presence is predictive of a mutation affecting said level or pattern of a protein synthesis in the plant; (B) permitting hybridization between said marker
 10 nucleic acid molecule and said complementary nucleic acid molecule obtained from said plant; and; (C) detecting the presence of the polymorphism, wherein the detection of the polymorphism is predictive of the mutation.

The present invention also provides a method for reducing expression of a protein in a plant cell, the method comprising: growing a transformed plant cell containing a
 15 nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof, wherein the transcribed strand of said nucleic acid is complementary to a nucleic acid molecule that encodes the protein in said plant cell, and whereby the strand that is complementary to the nucleic acid molecule that encodes the protein reduces or depresses expression of the protein.

20 The present invention provides wheat nucleic acid molecules for use as molecular tags to isolate genetic regions (i.e. promoters and flanking sequences), isolate genes, map genes, and determine gene function. The present invention further provides wheat nucleic acid molecules for use in determining if genes are members of a particular gene family.

25 The present invention also provides a method of obtaining full length genes using wheat ESTs or complements thereof or fragments of either.

The present invention also provides a method of isolating promoters and flanking sequences using wheat ESTs or complements thereof or fragments of either.

The present invention also provides wheat ESTs or complements thereof or fragments of either for use in marker-assisted breeding programs.

5 The present invention also provides a method of identifying tissues comprising hybridizing nucleic acids from the tissue with wheat ESTs or complements thereof or fragments of either.

10 The present invention also provides a method for production of antibodies targeted against the proteins, peptides, or fragments produced by the disclosed or complements thereof or fragments of either.

The present invention also provides a method for the transformation and regeneration of plants comprising sequences hybridizable to the disclosed ESTs or complements thereof or fragments of either.

15 The present invention also provides a method of modifying plant protein expression by inserting in a chimeric gene sense or antisense constructs of the wheat ESTs.

Detailed Description of the Invention

Agents

(a) Nucleic Acid Molecules

20 Agents of the present invention include nucleic acid molecules and more specifically EST nucleic acid molecules or nucleic acid fragment molecules thereof. Fragment EST nucleic acid molecules may encode significant portion(s) of, or indeed most of, the EST nucleic acid molecule. Alternatively, the fragments may comprise smaller oligonucleotides (having from about 15 to about 250 nucleotide residues, and
25 more preferably, about 15 to about 30 nucleotide residues).

A subset of the nucleic acid molecules of the present invention includes nucleic acid molecules that are marker molecules. Another subset of the nucleic acid molecules of the present invention include nucleic acid molecules that encode a protein or fragment thereof. Another subset of the nucleic acid molecules of the present invention are EST molecules.

The term “substantially purified”, as used herein, refers to a molecule separated from substantially all other molecules normally associated with it in its native state. More preferably a substantially purified molecule is the predominant species present in a preparation. A substantially purified molecule may be greater than 60% free, preferably 75% free, more preferably 90% free, and most preferably 95% free from the other molecules (exclusive of solvent) present in the natural mixture. The term “substantially purified” is not intended to encompass molecules present in their native state.

The agents of the present invention will preferably be “biologically active” with respect to either a structural attribute, such as the capacity of a nucleic acid to hybridize to another nucleic acid molecule, or the ability of a protein to be bound by antibody (or to compete with another molecule for such binding). Alternatively, such an attribute may be catalytic, and thus involve the capacity of the agent to mediate a chemical reaction or response.

The agents of the present invention may also be recombinant. As used herein, the term recombinant means any agent (e.g. DNA, peptide etc.), that is, or results, however indirect, from human manipulation of a nucleic acid molecule.

It is understood that the agents of the present invention may be labeled with reagents that facilitate detection of the agent (e.g. fluorescent labels (Prober, *et al.*, *Science* 238:336-340 (1987); Albarella *et al.*, EP 144914, chemical labels (Sheldon *et al.*, U.S. Patent 4,582,789; Albarella *et al.*, U.S. Patent 4,563,417, modified bases (Miyoshi *et al.*, EP 119448, all of which are hereby incorporated by reference in their entirety).

It is further understood, that the present invention provides bacterial, viral, microbial, and plant cells comprising the agents of the present invention.

Nucleic acid molecules or fragment thereof of the present invention are capable of specifically hybridizing to other nucleic acid molecules under certain circumstances. As used herein, two nucleic acid molecules are said to be capable of specifically hybridizing to one another if the two molecules are capable of forming an anti-parallel, double-stranded nucleic acid structure. A nucleic acid molecule is said to be the "complement" of another nucleic acid molecule if they exhibit complete complementarity. As used herein, molecules are said to exhibit "complete complementarity" when every nucleotide of one of the molecules is complementary to a nucleotide of the other. Two molecules are said to be "minimally complementary" if they can hybridize to one another with sufficient stability to permit them to remain annealed to one another under at least conventional "low-stringency" conditions. Similarly, the molecules are said to be "complementary" if they can hybridize to one another with sufficient stability to permit them to remain annealed to one another under conventional "high-stringency" conditions. Conventional stringency conditions are described by Sambrook, *et al.*, In: *Molecular Cloning, A Laboratory Manual, 2nd Edition, Cold Spring Harbor Press*, Cold Spring Harbor, New York (1989), and by Haymes, *et al.* In: *Nucleic Acid Hybridization, A Practical Approach*, IRL Press, Washington, DC (1985), the entirety of which is herein incorporated by reference. Departures from complete complementarity are therefore permissible, as long as such departures do not completely preclude the capacity of the molecules to form a double-stranded structure. Thus, in order for an nucleic acid molecule or fragment of the present invention to serve as a primer or probe it need only be sufficiently complementary in sequence to be able to form a stable double-stranded structure under the particular solvent and salt concentrations employed.

Appropriate stringency conditions which promote DNA hybridization are, for example, 6.0 x sodium chloride/sodium citrate (SSC) at about 45°C, followed by a wash

of 2.0 x SSC at 50°C, are known to those skilled in the art or can be found in *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989), 6.3.1-6.3.6. For example, the salt concentration in the wash step can be selected from a low stringency of about 2.0 x SSC at 50°C to a high stringency of about 0.2 x SSC at 50°C. In addition, the temperature in the wash step can be increased from low stringency conditions at room temperature, about 22°C, to high stringency conditions at about 65°C. Both temperature and salt may be varied, or either the temperature or the salt concentration may be held constant while the other variable is changed.

In a preferred embodiment, a nucleic acid of the present invention will specifically hybridize to one or more of the nucleic acid molecules set forth in SEQ ID NO: 1 through SEQ ID NO: 11840 or complements thereof under moderately stringent conditions, for example, at about 2.0 x SSC and about 65°C.

In a particularly preferred embodiment, a nucleic acid of the present invention will include those nucleic acid molecules that specifically hybridize to one or more of the nucleic acid molecules set forth in SEQ ID NO:1 through SEQ ID NO: 11840 or complements thereof under high stringency conditions.

In one aspect of the present invention, the nucleic acid molecules of the present invention have one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof. In another aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 90% sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof. In a further aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 95% sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof. In a more preferred aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 98%

sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof. In an even more preferred aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 99% sequence identity with one or more of the sequences set forth in SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof. In a further, even more preferred aspect of the present invention, one or more of the nucleic acid molecules of the present invention exhibit 100% sequence identity with one or more nucleic acid molecules present within the cDNA libraries designated LIB29, LIB30, LIB31, LIB103 and LIB104 (Monsanto Company, St. Louis, Missouri, United States of America).

In a preferred embodiment of the present invention, a wheat protein or fragment thereof of the present invention is a homologue of another plant protein. In another preferred embodiment of the present invention, a wheat protein or fragment thereof of the present invention is a homologue of a fungal protein. In another preferred embodiment of the present invention, a wheat protein or fragment thereof of the present invention is a homologue of mammalian protein. In another preferred embodiment of the present invention, a wheat protein or fragment thereof of the present invention is a homologue of a bacterial protein. In another preferred embodiment of the present invention, a wheat protein or fragment thereof of the present invention is a homologue of an algal protein. In another preferred embodiment of the present invention, a wheat protein or fragment thereof of the present invention is a homologue of a soybean protein. In another preferred embodiment of the present invention, a wheat protein or fragment thereof of the present invention is a homologue of a maize protein.

In a preferred embodiment of the present invention, the nucleic molecule of the present invention encodes a wheat protein or fragment thereof where a wheat protein or fragment thereof exhibits a BLAST probability score of greater than $1E-12$, preferably a

BLAST probability score of between about 1E-30 and about 1E-12, even more preferably a BLAST probability score of greater than 1E-30 with its homologue.

In another preferred embodiment of the present invention, the nucleic acid molecule encoding a wheat protein or fragment thereof exhibits a % identity with its homologue of between about 25% and about 40%, more preferably of between about 40 and about 70%, even more preferably of between about 70% and about 90% and even more preferably between about 90% and 99%. In another preferred embodiment, of the present invention, a wheat protein or fragment thereof exhibits a % identity with its homologue of 100%.

In a preferred embodiment of the present invention, the nucleic molecule of the present invention encodes a wheat protein or fragment thereof where the wheat protein exhibits a BLAST score of greater than 120, preferably a BLAST score of between about 1450 and about 120, even more preferably a BLAST score of greater than 1450 with its homologue.

Nucleic acid molecules of the present invention also include non-wheat homologues. Preferred non-wheat homologues are selected from the group consisting of alfalfa, *Arabidopsis*, barley, *Brassica*, broccoli, cabbage, citrus, cotton, garlic, oat, oilseed rape, onion, canola, flax, an ornamental plant, maize, pea, peanut, pepper, potato, rice, rye, sorghum, soybean, strawberry, sugarcane, sugarbeet, tomato, poplar, pine, fir, eucalyptus, apple, lettuce, lentils, grape, banana, tea, turf grasses, sunflower, oil palm and *Phaseolus*.

The degeneracy of the genetic code, which allows different nucleic acid sequences to code for the same protein or peptide, is known in the literature. (U.S. Patent No. 4,757,006, the entirety of which is herein incorporated by reference).

In an aspect of the present invention, one or more of the nucleic acid molecules of the present invention differ in nucleic acid sequence from those encoding a wheat protein or fragment thereof in SEQ ID NO: 1 through SEQ ID NO: 11840 due to the degeneracy

in the genetic code in that they encode the same protein but differ in nucleic acid sequence.

In another further aspect of the present invention, nucleic acid molecules of the present invention can comprise sequences, which differ from those encoding a protein or
 5 fragment thereof in SEQ ID NO: 1 through SEQ ID NO: 11840 due to fact that the different nucleic acid sequence encodes a protein having one or more conservative amino acid changes. It is understood that codons capable of coding for such conservative amino acid substitutions are known in the art.

It is well known in the art that one or more amino acids in a native sequence can
 10 be substituted with another amino acid(s), the charge and polarity of which are similar to that of the native amino acid, *i.e.*, a conservative amino acid substitution, resulting in a silent change. Conserved substitutes for an amino acid within the native polypeptide sequence can be selected from other members of the class to which the naturally occurring amino acid belongs. Amino acids can be divided into the following four
 15 groups: (1) acidic amino acids, (2) basic amino acids, (3) neutral polar amino acids, and (4) neutral nonpolar amino acids. Representative amino acids within these various groups include, but are not limited to, (1) acidic (negatively charged) amino acids such as aspartic acid and glutamic acid; (2) basic (positively charged) amino acids such as arginine, histidine, and lysine; (3) neutral polar amino acids such as glycine, serine,
 20 threonine, cysteine, cystine, tyrosine, asparagine, and glutamine; and (4) neutral nonpolar (hydrophobic) amino acids such as alanine, leucine, isoleucine, valine, proline, phenylalanine, tryptophan, and methionine.

Conservative amino acid changes within the native polypeptides sequence can be made by substituting one amino acid within one of these groups with another amino acid within the same group. Biologically functional equivalents of the proteins or fragments thereof of the present invention can have 10 or fewer conservative amino acid changes, more preferably seven or fewer conservative amino acid changes, and most preferably five or fewer conservative amino acid changes. The encoding nucleotide sequence will thus have corresponding base substitutions, permitting it to encode biologically functional equivalent forms of the proteins or fragments of the present invention.

It is understood that certain amino acids may be substituted for other amino acids in a protein structure without appreciable loss of interactive binding capacity with structures such as, for example, antigen-binding regions of antibodies or binding sites on substrate molecules. Because it is the interactive capacity and nature of a protein that defines that protein's biological functional activity, certain amino acid sequence substitutions can be made in a protein sequence and, of course, its underlying DNA coding sequence and, nevertheless, obtain a protein with like properties. It is thus contemplated by the inventors that various changes may be made in the peptide sequences of the proteins or fragments of the present invention, or corresponding DNA sequences that encode said peptides, without appreciable loss of their biological utility or activity. It is understood that codons capable of coding for such amino acid changes are known in the art.

In making such changes, the hydropathic index of amino acids may be considered. The importance of the hydropathic amino acid index in conferring interactive biological function on a protein is generally understood in the art (Kyte and Doolittle, *J. Mol. Biol.*

157, 105-132 (1982), herein incorporated by reference in its entirety). It is accepted that the relative hydrophobic character of the amino acid contributes to the secondary structure of the resultant protein, which in turn defines the interaction of the protein with other molecules, for example, enzymes, substrates, receptors, DNA, antibodies, antigens, and the like.

Each amino acid has been assigned a hydrophobic index on the basis of its hydrophobicity and charge characteristics (Kyte and Doolittle, 1982); these are isoleucine (+4.5), valine (+4.2), leucine (+3.8), phenylalanine (+2.8), cysteine/cystine (+2.5), methionine (+1.9), alanine (+1.8), glycine (-0.4), threonine (-0.7), serine (-0.8), tryptophan (-0.9), tyrosine (-1.3), proline (-1.6), histidine (-3.2), glutamate (-3.5), glutamine (-3.5), aspartate (-3.5), asparagine (-3.5), lysine (-3.9), and arginine (-4.5).

In making such changes, the substitution of amino acids whose hydrophobic indices are within ± 2 is preferred, those which are within ± 1 are particularly preferred, and those within ± 0.5 are even more particularly preferred.

It is also understood in the art that the substitution of like amino acids can be made effectively on the basis of hydrophilicity. U.S. Patent 4,554,101, incorporated herein by reference in its entirety, states that the greatest local average hydrophilicity of a protein, as governed by the hydrophilicity of its adjacent amino acids, correlates with a biological property of the protein.

As detailed in U.S. Patent 4,554,101, the following hydrophilicity values have been assigned to amino acid residues: arginine (+3.0), lysine (+3.0), aspartate (+3.0 \pm 1), glutamate (+3.0 \pm 1), serine (+0.3), asparagine (+0.2), glutamine (+0.2), glycine (0),

threonine (-0.4), proline (-0.5±1), alanine (-0.5), histidine (-0.5), cysteine (-1.0), methionine (-1.3), valine (-1.5), leucine (-1.8), isoleucine (-1.8), tyrosine (-2.3), phenylalanine (-2.5), and tryptophan (-3.4).

In making such changes, the substitution of amino acids whose hydrophilicity values are within ± 2 is preferred, those which are within ± 1 are particularly preferred, and those within ± 0.5 are even more particularly preferred.

In a further aspect of the present invention, one or more of the nucleic acid molecules of the present invention differ in nucleic acid sequence from those encoding a wheat protein or fragment thereof set forth in SEQ ID NO: 1 through SEQ ID NO: 11840 or fragment thereof due to the fact that one or more codons encoding an amino acid has been substituted for a codon that encodes a nonessential substitution of the amino acid originally encoded.

One aspect of the present invention concerns markers that include nucleic acid molecules SEQ ID NO: 1 through SEQ ID NO: 11840 or complements thereof or fragments of either that can act as markers or other nucleic acid molecules of the present invention that can act as markers. Genetic markers of the present invention include “dominant” or “codominant” markers “Codominant markers” reveal the presence of two or more alleles (two per diploid individual) at a locus. “Dominant markers” reveal the presence of only a single allele per locus. The presence of the dominant marker phenotype (e.g., a band of DNA) is an indication that one allele is present in either the homozygous or heterozygous condition. The absence of the dominant marker phenotype (e.g. absence of a DNA band) is merely evidence that “some other” undefined allele is present. In the case of populations where individuals are predominantly homozygous and loci are predominately dimorphic, dominant and codominant markers can be equally valuable. As populations become more heterozygous and multi-allelic, codominant markers often become more informative of the genotype than dominant markers. Marker

molecules can be, for example, capable of detecting polymorphisms such as single nucleotide polymorphisms (SNPs).

SNPs are single base changes in genomic DNA sequence. They occur at greater frequency and are spaced with a greater uniformity throughout a genome than other reported forms of polymorphism. The greater frequency and uniformity of SNPs means that there is greater probability that such a polymorphism will be found near or in a genetic locus of interest than would be the case for other polymorphisms. SNPs are located in protein-coding regions and noncoding regions of a genome. Some of these SNPs may result in defective or variant protein expression (e.g., as a results of mutations or defective splicing). Analysis (genotyping) of characterized SNPs can require only a plus/minus assay rather than a lengthy measurement, permitting easier automation.

SNPs can be characterized using any of a variety of methods. Such methods include the direct or indirect sequencing of the site, the use of restriction enzymes (Botstein *et al.*, *Am. J. Hum. Genet.* 32:314-331 (1980), the entirety of which is herein incorporated reference; Konieczny and Ausubel, *Plant J.* 4:403-410 (1993), the entirety of which is herein incorporated by reference), enzymatic and chemical mismatch assays (Myers *et al.*, *Nature* 313:495-498 (1985), the entirety of which is herein incorporated by reference), allele-specific PCR (Newton *et al.*, *Nucl. Acids Res.* 17:2503-2516 (1989), the entirety of which is herein incorporated by reference; Wu *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:2757-2760 (1989), the entirety of which is herein incorporated by reference), ligase chain reaction (Barany, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:189-193 (1991), the entirety of which is herein incorporated by reference), single-strand conformation polymorphism analysis (Labrune *et al.*, *Am. J. Hum. Genet.* 48: 1115-1120 (1991), the entirety of which is herein incorporated by reference), primer-directed nucleotide incorporation assays (Kuppuswami *et al.*, *Proc. Natl. Acad. Sci. USA* 88:1143-1147 (1991), the entirety of which is herein incorporated by reference), dideoxy fingerprinting (Sarkar *et al.*, *Genomics* 13:441-443 (1992), the entirety of which is herein incorporated

by reference), solid-phase ELISA-based oligonucleotide ligation assays (Nikiforov *et al.*, *Nucl. Acids Res.* 22:4167-4175 (1994), the entirety of which is herein incorporated by reference), oligonucleotide fluorescence-quenching assays (Livak *et al.*, *PCR Methods Appl.* 4:357-362 (1995), the entirety of which is herein incorporated by reference), 5'-
 5 nuclease allele-specific hybridization TaqMan assay (Livak *et al.*, *Nature Genet.* 9:341-342 (1995), the entirety of which is herein incorporated by reference), template-directed dye-terminator incorporation (TDI) assay (Chen and Kwok, *Nucl. Acids Res.* 25:347-353 (1997), the entirety of which is herein incorporated by reference), allele-specific molecular beacon assay (Tyagi *et al.*, *Nature Biotech.* 16: 49-53 (1998), the entirety of
 10 which is herein incorporated by reference), PinPoint assay (Haff and Smirnov, *Genome Res.* 7: 378-388 (1997), the entirety of which is herein incorporated by reference) and dCAPS analysis (Neff *et al.*, *Plant J.* 14:387-392 (1998), the entirety of which is herein incorporated by reference).

Additional markers, such as AFLP markers, RFLP markers and RAPD markers,
 15 can be utilized (Walton, *Seed World* 22-29 (July, 1993), the entirety of which is herein incorporated by reference; Burow and Blake, *Molecular Dissection of Complex Traits*, 13-29, Paterson (ed.), CRC Press, New York (1988), the entirety of which is herein incorporated by reference). DNA markers can be developed from nucleic acid molecules using restriction endonucleases, the PCR and/or DNA sequence information. RFLP
 20 markers result from single base changes or insertions/deletions. These codominant markers are highly abundant in plant genomes, have a medium level of polymorphism and are developed by a combination of restriction endonuclease digestion and Southern blotting hybridization. CAPS are similarly developed from restriction nuclease digestion but only of specific PCR products. These markers are also codominant, have a medium
 25 level of polymorphism and are highly abundant in the genome. The CAPS result from single base changes and insertions/deletions.

Another marker type, RAPDs, are developed from DNA amplification with random primers and result from single base changes and insertions/deletions in plant genomes. They are dominant markers with a medium level of polymorphisms and are highly abundant. AFLP markers require using the PCR on a subset of restriction fragments from extended adapter primers. These markers are both dominant and codominant are highly abundant in genomes and exhibit a medium level of polymorphism.

SSRs require DNA sequence information. These codominant markers result from repeat length changes, are highly polymorphic and do not exhibit as high a degree of abundance in the genome as CAPS, AFLPs and RAPDs, SNPs also require DNA sequence information. These codominant markers result from single base substitutions. They are highly abundant and exhibit a medium of polymorphism (Rafalski *et al.*, In: *Nonmammalian Genomic Analysis*, Birren and Lai (ed.), Academic Press, San Diego, CA, pp. 75-134 (1996), the entirety of which is herein incorporated by reference). It is understood that a nucleic acid molecule of the present invention may be used as a marker.

A PCR probe is a nucleic acid molecule capable of initiating a polymerase activity while in a double-stranded structure with another nucleic acid. Various methods for determining the structure of PCR probes and PCR techniques exist in the art. Computer generated searches using programs such as Primer3 (www-genome.wi.mit.edu/cgi-bin/primer/primer3.cgi), STSPipeline (www-genome.wi.mit.edu/cgi-bin/www-STS_Pipeline), or GeneUp (Pesole *et al.*, *BioTechniques* 25:112-123 (1998) the entirety of which is herein incorporated by reference), for example, can be used to identify potential PCR primers.

It is understood that a fragment of one or more of the nucleic acid molecules of the present invention may be a probe and specifically a PCR probe.

(b) Protein and Peptide Molecules

A class of agents comprises one or more of the protein or peptide molecules encoded by SEQ ID NO: 1 through SEQ ID NO:11840 or one or more of the protein or fragment thereof or peptide molecules encoded by other nucleic acid agents of the present invention. As used herein, the term "protein molecule" or "peptide molecule" includes any molecule that comprises five or more amino acids. It is well known in the art that proteins may undergo modification, including post-translational modifications, such as, but not limited to, disulfide bond formation, glycosylation, phosphorylation, or oligomerization. Thus, as used herein, the term "protein molecule" or "peptide molecule" includes any protein molecule that is modified by any biological or non-biological process. The terms "amino acid" and "amino acids" refer to all naturally occurring L-amino acids. This definition is meant to include norleucine, ornithine, homocysteine, and homoserine.

One or more of the protein or fragment of peptide molecules may be produced via chemical synthesis, or more preferably, by expression in a suitable bacterial or eukaryotic host. Suitable methods for expression are described by Sambrook, *et al.*, (In: *Molecular Cloning, A Laboratory Manual, 2nd Edition, Cold Spring Harbor Press, Cold Spring Harbor, New York (1989)*), or similar texts.

A "protein fragment" is a peptide or polypeptide molecule whose amino acid sequence comprises a subset of the amino acid sequence of that protein. A protein or fragment thereof that comprises one or more additional peptide regions not derived from that protein is a "fusion" protein. Such molecules may be derivatized to contain carbohydrate or other moieties (such as keyhole limpet hemocyanin, etc.). Fusion protein or peptide molecule of the present invention are preferably produced via recombinant means.

Another class of agents comprise protein or peptide molecules encoded by SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof or, fragments or fusions thereof in which non-essential, or not relevant, amino acid residues have been added,

replaced, or deleted. An example of such a homologue is the homologue protein of all non- wheat plant species, including but not limited to alfalfa, *Arabidopsis*, barley, *Brassica*, broccoli, cabbage, citrus, cotton, garlic, oat, oilseed rape, onion, canola, flax, maize, an ornamental plant, pea, peanut, pepper, potato, rice, rye, sorghum, soybean, strawberry, sugarcane, sugarbeet, tomato, poplar, pine, fir, eukalyptus, apple, lettuce, peas, lentils, grape, banana, tea, turf grasses, etc. Particularly preferred non-wheat plants to utilize for the isolation of homologues would include alfalfa, *Arabidopsis*, barley, cotton, corn, oat, oilseed rape, rice, canola, ornamentals, soybean, sugarcane, sugarbeet, tomato, potato, and turf grasses. Such a homologue can be obtained by any of a variety of methods. Most preferably, as indicated above, one or more of the disclosed sequences (SEQ ID NO: 1 through SEQ ID NO:11840 or complements thereof) will be used to define a pair of primers that may be used to isolate the homologue-encoding nucleic acid molecules from any desired species. Such molecules can be expressed to yield homologues by recombinant means.

(c) Antibodies

One aspect of the present invention concerns antibodies, single-chain antigen binding molecules, or other proteins that specifically bind to one or more of the protein or peptide molecules of the present invention and their homologues, fusions or fragments. Such antibodies may be used to quantitatively or qualitatively detect the protein or peptide molecules of the present invention. As used herein, an antibody or peptide is said to “specifically bind” to a protein or peptide molecule of the present invention if such binding is not competitively inhibited by the presence of non-related molecules.

Nucleic acid molecules that encode all or part of the protein of the present invention can be expressed, via recombinant means, to yield protein or peptides that can in turn be used to elicit antibodies that are capable of binding the expressed protein or peptide. Such antibodies may be used in immunoassays for that protein. Such protein-encoding molecules, or their fragments may be a “fusion” molecule (i.e., a part of a larger

nucleic acid molecule) such that, upon expression, a fusion protein is produced. It is understood that any of the nucleic acid molecules of the present invention may be expressed, via recombinant means, to yield proteins or peptides encoded by these nucleic acid molecules.

5 The antibodies that specifically bind proteins and protein fragments of the present invention may be polyclonal or monoclonal, and may comprise intact immunoglobulins, or antigen binding portions of immunoglobulins (such as (F(ab'), F(ab')₂) fragments, or single-chain immunoglobulins producible, for example, via recombinant means). It is understood that practitioners are familiar with the standard resource materials which
10 describe specific conditions and procedures for the construction, manipulation and isolation of antibodies (see, for example, Harlow and Lane, In *Antibodies: A Laboratory Manual*, Cold Spring Harbor Press, Cold Spring Harbor, New York (1988), the entirety of which is herein incorporated by reference).

 Murine monoclonal antibodies are particularly preferred. BALB/c mice are
15 preferred for this purpose, however, equivalent strains may also be used. The animals are preferably immunized with approximately 25 µg of purified protein (or fragment thereof) that has been emulsified a suitable adjuvant (such as TiterMax adjuvant (Vaxcel, Norcross, GA)). Immunization is preferably conducted at two intramuscular sites, one intraperitoneal site, and one subcutaneous site at the base of the tail. An additional i.v.
20 injection of approximately 25 µg of antigen is preferably given in normal saline three weeks later. After approximately 11 days following the second injection, the mice may be bled and the blood screened for the presence of anti-protein or peptide antibodies. Preferably, a direct binding Enzyme-Linked Immunoassay (ELISA) is employed for this purpose.

25 More preferably, the mouse having the highest antibody titer is given a third i.v. injection of approximately 25 µg of the same protein or fragment. The splenic leukocytes from this animal may be recovered 3 days later, and are then permitted to fuse, most

preferably, using polyethylene glycol, with cells of a suitable myeloma cell line (such as, for example, the P3X63Ag8.653 myeloma cell line). Hybridoma cells are selected by culturing the cells under "HAT" (hypoxanthine-aminopterin-thymine) selection for about one week. The resulting clones may then be screened for their capacity to produce

5 monoclonal antibodies ("mAbs), preferably by direct ELISA.

In one embodiment, anti-protein or peptide monoclonal antibodies are isolated using a fusion of a protein, protein fragment, or peptide of the present invention, or conjugate of a protein, protein fragment, or peptide of the present invention, as immunogens. Thus, for example, a group of mice can be immunized using a fusion

10 protein emulsified in Freund's complete adjuvant (e.g. approximately 50 µg of antigen per immunization). At three week intervals, an identical amount of antigen is emulsified in Freund's incomplete adjuvant and used to immunize the animals. Ten days following the third immunization, serum samples are taken and evaluated for the presence of antibody. If antibody titers are too low, a fourth booster can be employed. Polysera

15 capable of binding the protein or peptide can also be obtained using this method.

In a preferred procedure for obtaining monoclonal antibodies, the spleens of the above-described immunized mice are removed, disrupted, and immune splenocytes are isolated over a ficoll gradient. The isolated splenocytes are fused, using polyethylene glycol with BALB/c-derived HGPRT (hypoxanthine guanine phosphoribosyl transferase)

20 deficient P3x63xAg8.653 plasmacytoma cells. The fused cells are plated into 96-well microtiter plates and screened for hybridoma fusion cells by their capacity to grow in culture medium supplemented with hypoxanthine, aminopterin and thymidine for approximately 2-3 weeks.

Hybridoma cells that arise from such incubation are preferably screened for their

25 capacity to produce an immunoglobulin that binds to a protein of interest. An indirect ELISA may be used for this purpose. In brief, the supernatants of hybridomas are incubated in microtiter wells that contain immobilized protein. After washing, the titer of

bound immunoglobulin can be determined using, for example, a goat anti-mouse antibody conjugated to horseradish peroxidase. After additional washing, the amount of immobilized enzyme is determined (for example through the use of a chromogenic substrate). Such screening is performed as quickly as possible after the identification of the hybridoma in order to ensure that a desired clone is not overgrown by non-secreting neighbors. Desirably, the fusion plates are screened several times since the rates of hybridoma growth vary. In a preferred sub-embodiment, a different antigenic form of immunogen may be used to screen the hybridoma. Thus, for example, the splenocytes may be immunized with one immunogen, but the resulting hybridomas can be screened using a different immunogen. It is understood that any of the protein or peptide molecules of the present invention may be used to raise antibodies.

As discussed below, such antibody molecules or their fragments may be used for diagnostic purposes. Where the antibodies are intended for diagnostic purposes, it may be desirable to derivatize them, for example with a ligand group (such as biotin) or a detectable marker group (such as a fluorescent group, a radioisotope or an enzyme).

The ability to produce antibodies that bind the protein or peptide molecules of the present invention permits the identification of mimetic compounds of those molecules. A “mimetic compound” is a compound that is not that compound, or a fragment of that compound, but which nonetheless exhibits an ability to specifically bind to antibodies directed against that compound.

It is understood that any of the agents of the present invention can be substantially purified and/or be biologically active and/or recombinant.

Uses of the Agents of the Invention

The nucleic acid molecules and fragments thereof of the present invention include those from *Triticum aestivum* spikelets, which are collected from plants at Feekes stage greater than 10 but before anthesis. The ESTs of the present invention can enable the acquisition of, including but not limited to, genes involved in floral development,

reproduction, female production and development (ovary/ovule development, stigma development and style development), pollen production and development, seed production, glume development, lemma development, palea development, and pathogen resistance or susceptibility, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, non-regulatory genes and genes that regulate microsporogenesis, meiosis, cell cycle, signal transduction, cell-cell communication, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism, and seed composition and function. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention also can enable the acquisition of promoters and cis-regulatory elements which will be useful to express agronomically significant genes in these tissues and/or other tissues. The ESTs of the present invention also can enable the acquisition of molecular markers, which can be used in, including but not limited to, breeding schemes, genetic and molecular mapping, and cloning of agronomically significant genes.

The nucleic acid molecules and fragments thereof of the present invention include those from *Triticum aestivum* glumes, lemmas and paleas, which are collected from plants at Feekes stage greater than 10 but before anthesis. The ESTs of the present invention can enable the acquisition of genes, including but not limited to genes involved in floral development, glume development, lemma development, palea development, and pathogen resistance or susceptibility, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, non-regulatory genes and genes that regulate microsporogenesis, meiosis, cell

cycle, signal transduction, cell-cell communication, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed composition and function. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention also can enable the acquisition of promoters and cis-regulatory elements which will be useful to express agronomically significant genes in these tissues and/or other tissues. The ESTs of the present invention can enable the acquisition of molecular markers, which can be used in, including but not limited to, breeding schemes, genetic and molecular mapping, and cloning of agronomically significant genes.

The nucleic acid molecules and fragments, thereof, of the present invention, were isolated from floral reproductive tissues (stamens, gynoecium), which were harvested from *Triticum aestivum* plants at Feekes stage 8 and 9. Flower libraries can enable acquisition of, including but not limited to, genes that are involved in floral development, reproduction, female production and development (ovary/ovule development, stigma development and style development), pollen production and development, seed production, and pathogen resistance or susceptibility; therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, non-regulatory genes and genes that regulate microsporogenesis, meiosis, cell cycle, signal transduction, cell-cell communication, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed composition and function. Such genes are associated with plant growth, quality, yield, and could also serve as links in important

developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention also can enable the acquisition of promoters and cis-regulatory elements which will be useful to express agronomically significant genes in these tissues and/or other tissues. The ESTs of the present invention also can enable the acquisition of molecular markers, which can be used in, including but not limited to, breeding schemes, genetic and molecular mapping, and cloning of agronomically significant genes.

The nucleic acid molecules and fragments thereof of the present invention include those from *Triticum aestivum* 1-2 mm spikes, which are collected from plants at Feekes stage 4-5. The ESTs of the present invention can enable the acquisition of, including but not limited to genes involved in differentiation of floral parts and seeds, floral development, reproduction, female production and development (ovary/ovule development, stigma development and style development), pollen production and development, seed production, glume development, lemma development, palea development, and pathogen resistance or susceptibility, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, non-regulatory genes and genes that regulate microsporogenesis, meiosis, cell cycle, signal transduction, cell-cell communication, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed composition and function. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention also can enable the acquisition of promoters and cis-regulatory elements which will be useful

to express agronomically significant genes in these tissues and/or other tissues. The ESTs of the present invention also can enable the acquisition of molecular markers, which can be used in, including but not limited to, breeding schemes, genetic and molecular mapping, and cloning of agronomically significant genes.

5 The nucleic acid molecules and fragments thereof of the present invention include those from *Triticum aestivum* anthers, which are collected from plants at Feekes stage greater than 10 but before anthesis. The ESTs of the present invention can enable the acquisition of, including but not limited to genes involved in reproduction, pollen production and development, and pathogen resistance or susceptibility, therefore, the

10 ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, non-regulatory genes and genes that regulate microsporogenesis, meiosis, cell cycle, signal transduction, cell-cell communication, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient

15 components, carbohydrates, starch metabolism and seed composition and function. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present

20 invention also can enable the acquisition of promoters and cis-regulatory elements which will be useful to express agronomically significant genes in these tissues and/or other tissues. The ESTs of the present invention also can enable the acquisition of molecular markers, which can be used in, including but not limited to, breeding schemes, genetic and molecular mapping, and cloning of agronomically significant genes.

25 Nucleic acid molecules and fragments thereof of the present invention may be employed to obtain other nucleic acid molecules. Such molecules include the nucleic acid molecules of other plants or other organisms (*e.g.*, alfalfa, rice, potato, cotton, oat,

rye, barley, maize, wheat, *Arabidopsis*, *Brassica*, etc.) including the nucleic acid molecules that encode, in whole or in part, protein homologues of other plant species or other organisms, and sequences of genetic elements such as promoters and transcriptional regulatory elements. Such molecules can be readily obtained by using the above-

5 described nucleic acid molecules or fragments thereof to screen cDNA or genomic libraries obtained from such plant species. Methods for forming such libraries are well known in the art. Such homologue molecules may differ in their nucleotide sequences from those found in one or more of SEQ ID NO:1 through SEQ ID NO:11840 or complements thereof because complete complementarity is not needed for stable
10 hybridization. The nucleic acid molecules of the present invention therefore also include molecules that, although capable of specifically hybridizing with the nucleic acid molecules may lack "complete complementarity."

Any of a variety of methods may be used to obtain one or more of the above-described nucleic acid molecules (Zamechik *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*

15 83:4143-4146 (1986), the entirety of which is herein incorporated by reference; Goodchild *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:5507-5511 (1988), the entirety of which is herein incorporated by reference; Wickstrom *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:1028-1032 (1988), the entirety of which is herein incorporated by reference; Holt, *et al.*, *Molec. Cell. Biol.* 8:963-973 (1988), the entirety of which is herein
20 incorporated by reference; Gerwitz, *et al.*, *Science* 242:1303-1306 (1988), the entirety of which is herein incorporated by reference; Anfossi, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:3379-3383 (1989), the entirety of which is herein incorporated by reference; Becker, *et al.*, *EMBO J.* 8:3685-3691 (1989); the entirety of which is herein incorporated by reference). Automated nucleic acid synthesizers may be employed for this purpose. In
25 lieu of such synthesis, the disclosed nucleic acid molecules may be used to define a pair of primers that can be used with the polymerase chain reaction (Mullis, *et al.*, *Cold Spring Harbor Symp. Quant. Biol.* 51:263-273 (1986); Erlich *et al.*, EP 50,424; EP

84,796, EP 258,017, EP 237,362; Mullis, EP 201,184; Mullis *et al.*, US 4,683,202; Erlich, US 4,582,788; and Saiki, R. *et al.*, US 4,683,194, all of which are hereby incorporated by reference in their entirety) to amplify and obtain any desired nucleic acid molecule or fragment.

5 Promoter sequence(s) and other genetic elements including but not limited to transcriptional regulatory elements associated with one or more of the disclosed nucleic acid sequences can also be obtained using the disclosed nucleic acid sequences provided herein.

In one embodiment, such sequences are obtained by incubating EST nucleic acid
10 molecules or preferably fragments thereof with members of genomic libraries (e.g. maize, soybean and wheat) and recovering clones that hybridize to the EST nucleic acid molecule or fragment thereof. In a second embodiment, methods of "chromosome walking," or inverse PCR may be used to obtain such sequences (Frohman, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:8998-9002 (1988); Ohara, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86: 5673-5677 (1989); Pang *et al.*, *Biotechniques*, 22(6); 1046-1048 (1977);
15 Huang *et al.*, *Methods Mol. Biol.* 69: 89-96 (1977); Hartl *et al.*, *Methods Mol. Biol.* 58: 293-301 (1996), all of which are hereby incorporated by reference in their entirety). In one embodiment, the disclosed nucleic acid molecules are used to identify cDNAs whose analogous genes contain promoters with desirable expression patterns. The nucleic acid
20 molecules isolated from the library of the present invention are used to isolate promoters of tissue-enhanced, tissue-specific, developmentally- or environmentally-regulated expression profiles. Isolation and functional analysis of the 5' flanking promoter sequences of these genes from genomic libraries, for example, using genomic screening methods and PCR techniques would result in the isolation of useful promoters and
25 transcriptional regulatory elements. These methods are known to those of skill in the art and have been described (See for example Birren *et al.*, *Genome Analysis: Analyzing*

DNA, 1, (1997), Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., the entirety of which is herein incorporated by reference).

Promoters obtained utilizing the nucleic acid molecules of the present invention could also be modified to affect their control characteristics. Examples of such
 5 modifications would include but are not limited to enhancer sequences as reported by Kay *et al.*, *Science* 236:1299 (1987), herein incorporated by reference in its entirety. Such genetic elements could be used to enhance gene expression of new and existing traits for crop improvements.

The nucleic acid molecules of the present invention may be used to isolate
 10 promoters of tissue enhanced. tissue specific, cell-specific, cell -type, developmentally or environmentally regulated expression profiles. Isolation and functional analysis of the 5' flanking promoter sequences of these genes from genomic libraries, for example, using genomic screening methods and PCR techniques would result in the isolation of useful promoters and transcriptional regulatory elements. These methods are known to those of
 15 skill in the art and have been described (*See, for example, Birren et. al., Genome Analysis: Analyzing DNA*, 1, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y. (1997), the entirety of which is herein incorporated by reference). Promoters obtained utilizing the nucleic acid molecules of the present invention could also be modified to affect their control characteristics. Examples of such modifications would
 20 include but are not limited to enhancer sequences as reported by Kay, *et al Science* 236:1299 (1987), herein incorporated reference in its entirety. Such genetic elements could be used to enhance gene expression of new and existing traits for crop improvements.

In an aspect of the present invention, one or more of the nucleic molecules of the
 25 present invention are used to determine whether a plant (preferably wheat) has a mutation affecting the level (i.e., the concentration of mRNA in a sample, etc.) or pattern (i.e., the kinetics of expression, rate of decomposition, stability profile, etc.) of the expression

encoded in part or whole by one or more of the nucleic acid molecules of the present invention (collectively, the "Expression Response" of a cell or tissue). As used herein, the Expression Response manifested by a cell or tissue is said to be "altered" if it differs from the Expression Response of cells or tissues of plants not exhibiting the phenotype.

- 5 To determine whether a Expression Response is altered, the Expression Response manifested by the cell or tissue of the plant exhibiting the phenotype is compared with that of a similar cell or tissue sample of a plant not exhibiting the phenotype. As will be appreciated, it is not necessary to re-determine the Expression Response of the cell or tissue sample of plants not exhibiting the phenotype each time such a comparison is
- 10 made; rather, the Expression Response of a particular plant may be compared with previously obtained values of normal plants. As used herein, the phenotype of the organism is any of one or more characteristics of an organism (e.g. disease resistance, pest tolerance, environmental tolerance, male sterility, yield, quality improvements, etc.). A change in genotype or phenotype may be transient or permanent. Also as used herein,
- 15 a tissue sample is any sample that comprises more than one cell. In a preferred aspect, a tissue sample comprises cells that share a common characteristic (e.g. derived from leaf, root, or pollen etc).

In one sub-aspect, such an analysis is conducted by determining the presence and/or identity of polymorphism(s) by one or more of the nucleic acid molecules of the present invention and more specifically, one or more of the EST nucleic acid molecules or fragments thereof which are associated with phenotype, or a predisposition to phenotype.

Any of a variety of molecules can be used to identify such polymorphism(s). In one embodiment, one or more of the EST nucleic acid molecules (or a sub-fragment thereof) may be employed as a marker nucleic acid molecule to identify such

25 polymorphism(s). Alternatively, such polymorphisms can be detected through the use of

a marker nucleic acid molecule or a marker protein that is genetically linked to (i.e., a polynucleotide that co-segregates with) such polymorphism(s).

In an alternative embodiment, such polymorphisms can be detected through the use of a marker nucleic acid molecule that is physically linked to such polymorphism(s).

- 5 For this purpose, marker nucleic acid molecules comprising a nucleotide sequence of a polynucleotide located within 1 mb of the polymorphism(s), and more preferably within 100 kb of the polymorphism(s), and most preferably within 10 kb of the polymorphism(s) can be employed.

10 The genomes of animals and plants naturally undergo spontaneous mutation in the course of their continuing evolution (Gusella, *Ann. Rev. Biochem.* 55:831-854 (1986)). A “polymorphism” is a variation or difference in the sequence of the gene or its flanking regions that arises in some of the members of a species. The variant sequence and the “original” sequence co-exist in the species’ population. In some instances, such co-existence is in stable or quasi-stable equilibrium.

15 A polymorphism is thus said to be “allelic,” in that, due to the existence of the polymorphism, some members of a species may have the original sequence (i.e., the original “allele”) whereas other members may have the variant sequence (i.e., the variant “allele”). In the simplest case, only one variant sequence may exist, and the polymorphism is thus said to be di-allelic. In other cases, the species’ population may contain multiple alleles, and the polymorphism is termed tri-allelic, etc. A single gene
20 may have multiple different unrelated polymorphisms. For example, it may have a di-allelic polymorphism at one site, and a multi-allelic polymorphism at another site.

The variation that defines the polymorphism may range from a single nucleotide variation to the insertion or deletion of extended regions within a gene. In some cases,
25 the DNA sequence variations are in regions of the genome that are characterized by short tandem repeats (STRs) that include tandem di- or tri-nucleotide repeated motifs of nucleotides. Polymorphisms characterized by such tandem repeats are referred to as

"variable number tandem repeat" ("VNTR") polymorphisms. VNTRs have been used in identity analysis (Weber, U.S. Patent 5,075,217; Armour, *et al.*, *FEBS Lett.* 307:113-115 (1992); Jones, *et al.*, *Eur. J. Haematol.* 39:144-147 (1987); Horn, *et al.*, PCT Application WO91/14003; Jeffreys, European Patent Application 370,719; Jeffreys, U.S. Patent 5,699,082; Jeffreys, *et al.*, *Amer. J. Hum. Genet.* 39:11-24 (1986); Jeffreys, *et al.*, *Nature* 316:76-79 (1985); Gray, *et al.*, *Proc. R. Acad. Soc. Lond.* 243:241-253 (1991); Moore, *et al.*, *Genomics* 10:654-660 (1991); Jeffreys, *et al.*, *Anim. Genet.* 18:1-15 (1987); Hillel, *et al.*, *Anim. Genet.* 20:145-155 (1989); Hillel, *et al.*, *Genet.* 124:783-789 (1990), all of which are herein incorporated by reference in their entirety).

The detection of polymorphic sites in a sample of DNA may be facilitated through the use of nucleic acid amplification methods. Such methods specifically increase the concentration of polynucleotides that span the polymorphic site, or include that site and sequences located either distal or proximal to it. Such amplified molecules can be readily detected by gel electrophoresis or other means.

The most preferred method of achieving such amplification employs the polymerase chain reaction ("PCR") (Mullis, *et al.*, *Cold Spring Harbor Symp. Quant. Biol.* 51:263-273 (1986); Erlich, *et al.*, European Patent Appln. 50,424; European Patent Appln. 84,796, European Patent Application 258,017, European Patent Appln. 237,362; Mullis, European Patent Appln. 201,184; Mullis, *et al.*, U.S. Patent No. 4,683,202; Erlich, U.S. Patent No. 4,582,788; and Saiki, *et al.*, U.S. Patent No. 4,683,194, all of which are herein incorporated by reference), using primer pairs that are capable of hybridizing to the proximal sequences that define a polymorphism in its double-stranded form.

In lieu of PCR, alternative methods, such as the "Ligase Chain Reaction" ("LCR") may be used (Barany, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:189-193 (1991), the entirety of which is herein incorporated by reference). LCR uses two pairs of oligonucleotide probes to exponentially amplify a specific target. The sequences of each pair of oligonucleotides

is selected to permit the pair to hybridize to abutting sequences of the same strand of the target. Such hybridization forms a substrate for a template-dependent ligase. As with PCR, the resulting products thus serve as a template in subsequent cycles and an exponential amplification of the desired sequence is obtained.

5 LCR can be performed with oligonucleotides having the proximal and distal sequences of the same strand of a polymorphic site. In one embodiment, either oligonucleotide will be designed to include the actual polymorphic site of the polymorphism. In such an embodiment, the reaction conditions are selected such that the oligonucleotides can be ligated together only if the target molecule either contains or
10 lacks the specific nucleotide that is complementary to the polymorphic site present on the oligonucleotide. Alternatively, the oligonucleotides may be selected such that they do not include the polymorphic site (see, Segev, PCT Application WO 90/01069, the entirety of which is herein incorporated by reference).

The "Oligonucleotide Ligation Assay" ("OLA") may alternatively be employed
15 (Landegren, *et al.*, *Science* 241:1077-1080 (1988), the entirety of which is herein incorporated by reference). The OLA protocol uses two oligonucleotides which are designed to be capable of hybridizing to abutting sequences of a single strand of a target. OLA, like LCR, is particularly suited for the detection of point mutations. Unlike LCR, however, OLA results in "linear" rather than exponential amplification of the target
20 sequence.

Nickerson, *et al.* have described a nucleic acid detection assay that combines attributes of PCR and OLA (Nickerson, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:8923-8927 (1990), the entirety of which is herein incorporated by reference). In this method, PCR is used to achieve the exponential amplification of target DNA, which is then
25 detected using OLA. In addition to requiring multiple, and separate, processing steps, one problem associated with such combinations is that they inherit all of the problems associated with PCR and OLA.

Schemes based on ligation of two (or more) oligonucleotides in the presence of nucleic acid having the sequence of the resulting "di-oligonucleotide", thereby amplifying the di-oligonucleotide, are also known (Wu, *et al.*, *Genomics* 4:560 (1989), the entirety of which is herein incorporated by reference), and may be readily adapted to the purposes of the present invention.

Other known nucleic acid amplification procedures, such as allele-specific oligomers, branched DNA technology, transcription-based amplification systems, or isothermal amplification methods may also be used to amplify and analyze such polymorphisms (Malek, *et al.*, U.S. Patent 5,130,238; Davey, *et al.*, European Patent Application 329,822; Schuster *et al.*, U.S. Patent 5,169,766; Miller, *et al.*, PCT Application WO 89/06700; Kwoh, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:1173-1177 (1989); Gingeras, *et al.*, PCT Application WO 88/10315; Walker, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:392-396 (1992), all of which are herein incorporated by reference in their entirety).

The identification of a polymorphism can be determined in a variety of ways. By correlating the presence or absence of it in a plant with the presence or absence of a phenotype, it is possible to predict the phenotype of that plant. If a polymorphism creates or destroys a restriction endonuclease cleavage site, or if it results in the loss or insertion of DNA (e.g., a VNTR polymorphism), it will alter the size or profile of the DNA fragments that are generated by digestion with that restriction endonuclease. As such, individuals that possess a variant sequence can be distinguished from those having the original sequence by restriction fragment analysis. Polymorphisms that can be identified in this manner are termed "restriction fragment length polymorphisms" ("RFLPs"). RFLPs have been widely used in human and plant genetic analyses (Glassberg, UK Patent Application 2135774; Skolnick, *et al.*, *Cytogen. Cell Genet.* 32:58-67 (1982); Botstein, *et al.*, *Ann. J. Hum. Genet.* 32:314-331 (1980); Fischer, *et al.* (PCT Application WO90/13668); Uhlen, PCT Application WO90/11369).

Polymorphisms can also be identified by Single Strand Conformation

Polymorphism (SSCP) analysis. The SSCP technique is a method capable of identifying most sequence variations in a single strand of DNA, typically between 150 and 250

nucleotides in length (Elles, *Methods in Molecular Medicine: Molecular Diagnosis of*

5 *Genetic Diseases*, Humana Press (1996), the entirety of which is herein incorporated by

reference); Orita *et al.*, *Genomics* 5: 874-879 (1989), the entirety of which is herein

incorporated by reference). Under denaturing conditions a single strand of DNA will

adopt a conformation that is uniquely dependent on its sequence conformation. This

conformation usually will be different, even if only a single base is changed. Most

10 conformations have been reported to alter the physical configuration or size sufficiently

to be detectable by electrophoresis. A number of protocols have been described for SSCP

including, but not limited to Lee *et al.*, *Anal. Biochem.* 205: 289-293 (1992), the entirety

of which is herein incorporated by reference; Suzuki *et al.*, *Anal. Biochem.* 192: 82-84

(1991), the entirety of which is herein incorporated by reference; Lo *et al.*, *Nucleic Acids*

15 *Research* 20: 1005-1009 (1992), the entirety of which is herein incorporated by reference;

Sarkar *et al.*, *Genomics* 13: 441-443 (1992), the entirety of which is herein incorporated

by reference). It is understood that one or more of the nucleic acids of the present

invention, may be utilized as markers or probes to detect polymorphisms by SSCP

analysis.

20 Polymorphisms may also be found using a DNA fingerprinting technique called

amplified fragment length polymorphism (AFLP), which is based on the selective PCR

amplification of restriction fragments from a total digest of genomic DNA to profile that

DNA. Vos, *et al.*, *Nucleic Acids Res.* 23:4407-4414 (1995), the entirety of which is

herein incorporated by reference. This method allows for the specific co-amplification of

25 high numbers of restriction fragments, which can be visualized by PCR without

knowledge of the nucleic acid sequence.

AFLP employs basically three steps. Initially, a sample of genomic DNA is cut with restriction enzymes and oligonucleotide adapters are ligated to the restriction fragments of the DNA. The restriction fragments are then amplified using PCR by using the adapter and restriction sequence as target sites for primer annealing. The selective
 5 amplification is achieved by the use of primers that extend into the restriction fragments, amplifying only those fragments in which the primer extensions match the nucleotide flanking the restriction sites. These amplified fragments are then visualized on a denaturing polyacrylamide gel.

AFLP analysis has been performed on *Salix* (Beismann, *et al.*, *Mol. Ecol.* 6:989-
 10 993 (1997), the entirety of which is herein incorporated by reference); *Acinetobacter* (Janssen, *et al.*, *Int. J. Syst. Bacteriol* 47:1179-1187 (1997), the entirety of which is herein incorporated by reference), *Aeromonas popoffi* (Huys, *et al.*, *Int. J. Syst. Bacteriol.* 47:1165-1171 (1997), the entirety of which is herein incorporated by reference), rice (McCouch, *et al.*, *Plant Mol. Biol.* 35:89-99 (1997), the entirety of which is herein
 15 incorporated by reference); Nandi, *et al.*, *Mol. Gen. Genet.* 255:1-8 (1997); Cho, *et al.*, *Genome* 39:373-378 (1996), herein incorporated by reference), barley (*Hordeum vulgare*)(Simons, *et al.*, *Genomics* 44:61-70 (1997), the entirety of which is herein incorporated by reference; Waugh, *et al.*, *Mol. Gen. Genet.* 255:311-321 (1997), the entirety of which is herein incorporated by reference; Qi, *et al.*, *Mol. Gen. Genet.* 254:330-
 20 336 (1997), the entirety of which is herein incorporated by reference; Becker, *et al.*, *Mol. Gen. Genet.* 249:65-73 (1995), the entirety of which is herein incorporated by reference), potato (Van der Voort, *et al.*, *Mol. Gen. Genet.* 255:438-447 (1997), the entirety of which is herein incorporated by reference; Meksem, *et al.*, *Mol. Gen. Genet.* 249:74-81 (1995), the entirety of which is herein incorporated by reference), *Phytophthora infestans* (Van
 25 der Lee, *et al.*, *Fungal Genet. Biol.* 21:278-291 (1997), the entirety of which is herein incorporated by reference), *Bacillus anthracis* (Keim, *et al.*, *J. Bacteriol.* 179:818-824 (1997)), *Astragalus cremnophylax* (Travis, *et al.*, *Mol. Ecol.* 5:735-745 (1996), the

entirety of which is herein incorporated by reference), *Arabidopsis* (Cnops, *et al.*, *Mol. Gen. Genet.* 253:32-41 (1996), the entirety of which is herein incorporated by reference), *Escherichia coli* (Lin, *et al.*, *Nucleic Acids Res.* 24:3649-3650 (1996), the entirety of which is herein incorporated by reference), *Aeromonas* (Huys, *et al.*, *Int. J. Syst. Bacteriol.* 46:572-580 (1996), the entirety of which is herein incorporated by reference), nematode (Folkertsma, *et al.*, *Mol. Plant Microbe Interact.* 9:47-54 (1996), the entirety of which is herein incorporated by reference), tomato (Thomas, *et al.*, *Plant J.* 8:785-794 (1995), the entirety of which is herein incorporated by reference), and human (Latorra, *et al.*, *PCR Methods Appl.* 3:351-358 (1994)). AFLP analysis has also been used for fingerprinting mRNA (Money, *et al.*, *Nucleic Acids Res.* 24:2616-2617 (1996), the entirety of which is herein incorporated by reference; Bachem, *et al.*, *Plant J.* 9:745-753 (1996), the entirety of which is herein incorporated by reference). It is understood that one or more of the nucleic acids of the present invention, may be utilized as markers or probes to detect polymorphisms by AFLP analysis for fingerprinting mRNA.

Polymorphisms may also be found using random amplified polymorphic DNA (RAPD) (Williams *et al.*, *Nucl. Acids Res.* 18: 6531-6535 (1990), the entirety of which is herein incorporated by reference) and cleaveable amplified polymorphic sequences (CAPS) (Lyamichev *et al.*, *Science* 260: 778-783 (1993), the entirety of which is herein incorporated by reference). It is understood that one or more of the nucleic acids of the present invention, may be utilized as markers or probes to detect polymorphisms by RAPD or CAPS analysis.

Polymorphisms are useful, through linkage analysis, to define the genetic distances or physical distances between polymorphic traits. A physical map or ordered array of genomic DNA fragments in the desired region containing the gene may be used to characterize and isolate genes corresponding to desirable traits. For this purpose, yeast artificial chromosomes (YACs), bacterial artificial chromosomes (BACs), and cosmids are appropriate vectors for cloning large segments of DNA molecules. Although fewer

clones are needed to make a contig for a specific genomic region by using YACs (Agyare *et al.*, *Genome Res.* 7: 1-9 (1997), the entirety of which is herein incorporated by reference; James *et al.*, *Genomics* 32: 425-430 (1996), the entirety of which is herein incorporated by reference), chimerism in the inserted DNA fragment can arise. Cosmids are convenient for handling smaller-size DNA molecules and may be used for transformation in developing transgenic plants. BACs also carry DNA fragments and are less prone to chimerism.

Through genetic mapping, a fine scale linkage map can be developed using DNA markers and, then, a genomic DNA library of large-sized fragments can be screened with molecular markers linked to the desired trait. Molecular markers are advantageous for agronomic traits that are otherwise difficult to tag, such as resistance to pathogens, insects and nematodes, tolerance to abiotic stress, quality parameters and quantitative traits such as high yield potential.

The essential requirements for marker-assisted selection in a plant breeding program are: (1) the marker(s) should co-segregate or be closely linked with the desired trait; (2) an efficient means of screening large populations for the molecular marker(s) should be available; and (3) the screening technique should have high reproducibility across laboratories and preferably be economical to use and be user-friendly.

The genetic linkage of marker molecules can be established by a gene mapping model such as, without limitation, the flanking marker model reported by Lander and Botstein, *Genetics* 121:185-199 (1989) and the interval mapping, based on maximum likelihood methods described by Lander and Botstein, *Genetics* 121:185-199 (1989) and implemented in the software package MAPMAKER/QTL (Lincoln and Lander, *Mapping Genes Controlling Quantitative Traits Using MAPMAKER/QTL*, Whitehead Institute for Biomedical Research, Massachusetts, (1990). Additional software includes Qgene, Version 2.23 (1996), Department of Plant Breeding and Biometry, 266 Emerson Hall,

Cornell University, Ithaca, NY, the manual of which is herein incorporated by reference in its entirety). Use of Qgene software is a particularly preferred approach.

A maximum likelihood estimate (MLE) for the presence of a marker is calculated, together with an MLE assuming no QTL effect, to avoid false positives. A \log_{10} of an odds ratio (LOD) is then calculated as: $\text{LOD} = \log_{10}(\text{MLE for the presence of a QTL} / \text{MLE given no linked QTL})$.

The LOD score essentially indicates how much more likely the data are to have arisen assuming the presence of a QTL than in its absence. The LOD threshold value for avoiding a false positive with a given confidence, say 95%, depends on the number of markers and the length of the genome. Graphs indicating LOD thresholds are set forth in Lander and Botstein, *Genetics* 121:185-199 (1989) the entirety of which is herein incorporated by reference and further described by Arús and Moreno-González, *Plant Breeding*, Hayward *et al.*, (eds.) Chapman & Hall, London, pp. 314-331 (1993), the entirety of which is herein incorporated by reference.

Additional models can be used. Many modifications and alternative approaches to interval mapping have been reported, including the use of non-parametric methods (Kruglyak and Lander, *Genetics* 139:1421-1428 (1995), the entirety of which is herein incorporated by reference). Multiple regression methods or models can be also be used, in which the trait is regressed on a large number of markers (Jansen, *Biometrics in Plant Breeding*, van Oijen and Jansen (eds.), Proceedings of the Ninth Meeting of the Eucarpia Section Biometrics in Plant Breeding, The Netherlands, pp. 116-124 (1994); Weber and Wricke, *Advances in Plant Breeding*, Blackwell, Berlin, 16 (1994), both of which is herein incorporated by reference in their entirety). Procedures combining interval mapping with regression analysis, whereby the phenotype is regressed onto a single putative QTL at a given marker interval and at the same time onto a number of markers that serve as 'cofactors,' have been reported by Jansen and Stam, *Genetics* 136:1447-1455 (1994), the entirety of which is herein incorporated by reference and Zeng, *Genetics*

136:1457-1468 (1994) the entirety of which is herein incorporated by reference.

Generally, the use of cofactors reduces the bias and sampling error of the estimated QTL positions (Utz and Melchinger, *Biometrics in Plant Breeding*, van Oijen and Jansen (eds.)

Proceedings of the Ninth Meeting of the Eucarpia Section Biometrics in Plant Breeding,

- 5 The Netherlands, pp.195-204 (1994), the entirety of which is herein incorporated by reference, thereby improving the precision and efficiency of QTL mapping (Zeng, *Genetics* 136:1457-1468 (1994)). These models can be extended to multi-environment experiments to analyze genotype-environment interactions (Jansen *et al.*, *Theo. Appl. Genet.* 91:33-37 (1995), the entirety of which is herein incorporated by reference).

- 10 Selection of an appropriate mapping population is important to map construction. The choice of an appropriate mapping population depends on the type of marker systems employed (Tanksley *et al.*, *Molecular mapping plant chromosomes. Chromosome structure and function: Impact of new concepts*, Gustafson and Appels (eds.), Plenum Press, New York, pp 157-173 (1988), the entirety of which is herein incorporated by
- 15 reference). Consideration must be given to the source of parents (adapted vs. exotic) used in the mapping population. Chromosome pairing and recombination rates can be severely disturbed (suppressed) in wide crosses (adapted x exotic) and generally yield greatly reduced linkage distances. Wide crosses will usually provide segregating populations with a relatively large array of polymorphisms when compared to progeny in a narrow
- 20 cross (adapted x adapted).

- An F_2 population is the first generation of selfing after the hybrid seed is produced. Usually a single F_1 plant is selfed to generate a population segregating for all the genes in Mendelian (1:2:1) fashion. Maximum genetic information is obtained from a completely classified F_2 population using a codominant marker system (Mather,
- 25 *Measurement of Linkage in Heredity*, Methuen and Co., (1938), the entirety of which is herein incorporated by reference). In the case of dominant markers, progeny tests (e.g. F_3 , BCF_2) are required to identify the heterozygotes, thus making it equivalent to a

completely classified F_2 population. However, this procedure is often prohibitive because of the cost and time involved in progeny testing. Progeny testing of F_2 individuals is often used in map construction where phenotypes do not consistently reflect genotype (e.g. disease resistance) or where trait expression is controlled by a QTL. Segregation data from progeny test populations (e.g. F_3 or BCF_2) can be used in map construction. Marker-assisted selection can then be applied to cross progeny based on marker-trait map associations (F_2 , F_3), where linkage groups have not been completely disassociated by recombination events (i.e., maximum disequilibrium).

Recombinant inbred lines (RIL) (genetically related lines; usually $>F_5$, developed from continuously selfing F_2 lines towards homozygosity) can be used as a mapping population. Information obtained from dominant markers can be maximized by using RIL because all loci are homozygous or nearly so. Under conditions of tight linkage (i.e., about $<10\%$ recombination), dominant and co-dominant markers evaluated in RIL populations provide more information per individual than either marker type in backcross populations (Reiter *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:1477-1481 (1992), the entirety of which is herein incorporated by reference). However, as the distance between markers becomes larger (i.e., loci become more independent), the information in RIL populations decreases dramatically when compared to codominant markers.

Backcross populations (e.g., generated from a cross between a successful variety (recurrent parent) and another variety (donor parent) carrying a trait not present in the former) can be utilized as a mapping population. A series of backcrosses to the recurrent parent can be made to recover most of its desirable traits. Thus a population is created consisting of individuals nearly like the recurrent parent but each individual carries varying amounts or mosaic of genomic regions from the donor parent. Backcross populations can be useful for mapping dominant markers if all loci in the recurrent parent are homozygous and the donor and recurrent parent have contrasting polymorphic marker alleles (Reiter *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:1477-1481 (1992)). Information

obtained from backcross populations using either codominant or dominant markers is less than that obtained from F₂ populations because one, rather than two, recombinant gametes are sampled per plant. Backcross populations, however, are more informative (at low marker saturation) when compared to RILs as the distance between linked loci increases in RIL populations (i.e. about 15% recombination). Increased recombination can be beneficial for resolution of tight linkages, but may be undesirable in the construction of maps with low marker saturation.

Near-isogenic lines (NIL) created by many backcrosses to produce an array of individuals that are nearly identical in genetic composition except for the trait or genomic region under interrogation can be used as a mapping population. In mapping with NILs, only a portion of the polymorphic loci are expected to map to a selected region.

Bulk segregant analysis (BSA) is a method developed for the rapid identification of linkage between markers and traits of interest (Michelmore *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:9828-9832 (1991), the entirety of which is herein incorporated by reference). In BSA, two bulked DNA samples are drawn from a segregating population originating from a single cross. These bulks contain individuals that are identical for a particular trait (resistant or susceptible to particular disease) or genomic region but arbitrary at unlinked regions (i.e. heterozygous). Regions unlinked to the target region will not differ between the bulked samples of many individuals in BSA.

It is understood that one or more of the nucleic acid molecules of the present invention may be used as molecular markers. It is also understood that one or more of the protein molecules of the present invention may be used as molecular markers.

In accordance with this aspect of the present invention, a sample nucleic acid is obtained from plants cells or tissues. Any source of nucleic acid may be used. Preferably, the nucleic acid is genomic DNA. The nucleic acid is subjected to restriction endonuclease digestion. For example, one or more EST nucleic acid molecule or fragment thereof can be used as a probe in accordance with the above-described

polymorphic methods. The polymorphism obtained in this approach can then be cloned to identify the mutation at the coding region which alters the protein's structure or regulatory region of the gene which affects its expression level.

In one aspect of the present invention, an evaluation can be conducted to

- 5 determine whether a particular mRNA molecule is present. One or more of the nucleic acid molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention are utilized to detect the presence or quantity of the mRNA species. Such molecules are then incubated with cell or tissue extracts of a plant under conditions sufficient to permit nucleic acid hybridization. The detection of double-
- 10 stranded probe-mRNA hybrid molecules is indicative of the presence of the mRNA; the amount of such hybrid formed is proportional to the amount of mRNA. Thus, such probes may be used to ascertain the level and extent of the mRNA production in a plant's cells or tissues. Such nucleic acid hybridization may be conducted under quantitative conditions (thereby providing a numerical value of the amount of the mRNA present).
- 15 Alternatively, the assay may be conducted as a qualitative assay that indicates either that the mRNA is present, or that its level exceeds a user set, predefined value.

- A principle of *in situ* hybridization is that a labeled, single-stranded nucleic acid probe will hybridize to a complementary strand of cellular DNA or RNA and, under the appropriate conditions, these molecules will form a stable hybrid. When nucleic acid
- 20 hybridization is combined with histological techniques, specific DNA or RNA sequences can be identified within a single cell. An advantage of *in situ* hybridization over more conventional techniques for the detection of nucleic acids is that it allows an investigator to determine the precise spatial population (Angerer *et al.*, *Dev. Biol.* 101: 477-484 (1984), the entirety of which is herein incorporated by reference; Angerer *et al.*, *Dev.*
 - 25 *Biol.* 112: 157-166 (1985), the entirety of which is herein incorporated by reference; Dixon *et al.*, *EMBO J.* 10: 1317-1324 (1991), the entirety of which is herein incorporated by reference). *In situ* hybridization may be used to measure the steady-state level of

RNA accumulation. It is a sensitive technique and RNA sequences present in as few as 5-10 copies per cell can be detected (Hardin *et al.*, *J. Mol. Biol.* 202: 417-431.(1989), the entirety of which is herein incorporated by reference). A number of protocols have been devised for *in situ* hybridization, each with tissue preparation, hybridization, and washing conditions (Meyerowitz, *Plant Mol. Biol. Rep.* 5: 242-250 (1987), the entirety of which is herein incorporated by reference; Cox and Goldberg, In: *Plant Molecular Biology: A Practical Approach* (ed. C.H. Shaw), pp. 1-35. IRL Press, Oxford (1988), the entirety of which is herein incorporated by reference; Raikhel *et al.*, *In situ RNA hybridization in plant tissues*. In *Plant Molecular Biology Manual*, vol. B9: 1-32. Kluwer Academic Publisher, Dordrecht, Belgium (1989), the entirety of which is herein incorporated by reference).

In situ hybridization also allows for the localization of proteins within a tissue or cell (Wilkinson, *In Situ Hybridization*, Oxford University Press, Oxford (1992), the entirety of which is herein incorporated by reference; Langdale, *In Situ Hybridization* 165-179 In: *The Maize Handbook*, eds. Freeling and Walbot, Springer-Verlag, New York (1994), the entirety of which is herein incorporated by reference). It is understood that one or more of the molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention or one or more of the antibodies of the present invention may be utilized to detect the level or pattern of a protein or fragment thereof by *in situ* hybridization.

Fluorescent *in situ* hybridization also enables the localization of a particular DNA sequence along a chromosome which is useful, among other uses, for gene mapping, following chromosomes in hybrid lines or detecting chromosomes with translocations, transversions or deletions. *In situ* hybridization has been used to identify chromosomes in several plant species (Griffor *et al.*, *Plant Mol. Biol.* 17: 101-109 (1991), the entirety of which is herein incorporated by reference; Gustafson *et al.*, *Proc. Nat'l. Acad. Sci. (U.S.A.)* 87: 1899-1902 (1990), herein incorporated by reference; Mukai and Gill,

Genome 34: 448-452. (1991); Schwarzacher and Heslop-Harrison, *Genome* 34: 317-323 (1991); Wang *et al.*, *Jpn. J. Genet.* 66: 313-316 (1991), the entirety of which is herein incorporated by reference; Parra and Windle, *Nature Genetics*, 5: 17-21 (1993), the entirety of which is herein incorporated by reference). It is understood that the nucleic acid molecules of the present invention may be used as probes or markers to localize sequences along a chromosome.

It is also understood that one or more of the molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention or one or more of the antibodies of the present invention may be utilized to detect the expression level or pattern of a protein or mRNA thereof by *in situ* hybridization.

Another method to localize the expression of a molecule is tissue printing. Tissue printing provides a way to screen, at the same time on the same membrane many tissue sections from different plants or different developmental stages. Tissue-printing procedures utilize films designed to immobilize proteins and nucleic acids. In essence, a freshly cut section of an organ is pressed gently onto nitrocellulose paper, nylon membrane or polyvinylidene difluoride membrane. Such membranes are commercially available (e.g. Millipore, Bedford, Massachusetts). The contents of the cut cell transfer onto the membrane, and the molecules are immobilized to the membrane. The immobilized molecules form a latent print that can be visualized with appropriate probes. When a plant tissue print is made on nitrocellulose paper, the cell walls leave a physical print that makes the anatomy visible without further treatment (Varner and Taylor, *Plant Physiol.* 91: 31-33 (1989), the entirety of which is herein incorporated by reference).

Tissue printing on substrate films is described by Daoust, *Exp. Cell Res.* 12: 203-211 (1957), the entirety of which is herein incorporated by reference, who detected amylase, protease, ribonuclease, and deoxyribonuclease in animal tissues using starch, gelatin, and agar films. These techniques can be applied to plant tissues (Yomo and Taylor, *Planta* 112:35-43 (1973); Harris and Chrispeels, *Plant Physiol.* 56: 292-299

(1975). Advances in membrane technology have increased the range of applications of Daoust's tissue-printing techniques allowing (Cassab and Varner, *J. Cell. Biol.* 105: 2581-2588 (1987), the entirety of which is herein incorporated by reference; the histochemical localization of various plant enzymes and deoxyribonuclease on

5 nitrocellulose paper and nylon (Spruce *et al.*, *Phytochemistry*, 26: 2901-2903 (1987), the entirety of which is herein incorporated by reference; Barres *et al.* *Neuron* 5: 527-544 (1990), the entirety of which is herein incorporated by reference; the entirety of which is herein incorporated by reference; Reid and Pont-Lezica, *Tissue Printing: Tools for the Study of Anatomy, Histochemistry, and Gene Expression*, Academic Press, New York,

10 New York (1992), the entirety of which is herein incorporated by reference; Reid *et al.* *Plant Physiol.* 93: 160-165 (1990), herein incorporate by reference; Ye *et al.* *Plant J.* 1: 175-183 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention or one

15 or more of the antibodies of the present invention may be utilized to detect the presence or quantity of a protein by tissue printing.

Further, it is also understood that any of the nucleic acid molecules of the present invention may be used as marker nucleic acids and or probes in connection with methods that require probes or marker nucleic acids. As used herein, a probe is an agent that is

20 utilized to determine an attribute or feature (e.g. presence or absence, location, correlation, etc.) or a molecule, cell, tissue or plant. As used herein, a marker nucleic acid is a nucleic acid molecule that is utilized to determine an attribute or feature (e.g., presence or absence, location, correlation, etc.) or a molecule, cell, tissue or plant.

A microarray-based method for high-throughput monitoring of plant gene

25 expression may be utilized to measure gene-specific hybridization targets. This 'chip'-based approach involves using microarrays of nucleic acid molecules as gene-specific hybridization targets to quantitatively measure expression of the corresponding plant

genes (Schena *et al.*, *Science* 270: 467-470 (1995), the entirety of which is herein incorporated by reference; Shalon, Ph.D. Thesis. Stanford University (1996), the entirety of which is herein incorporated by reference). Every nucleotide in a large sequence can be queried at the same time. Hybridization can be used to efficiently analyze large amounts of nucleotide sequence.

Several microarray methods have been described. One method compares the sequences to be analyzed by hybridization to a set of oligonucleotides representing all possible subsequences (Bains and Smith, *J. Theor. Biol.* 135: 303 (1989), the entirety of which is herein incorporated by reference). A second method hybridizes the sample to an array of oligonucleotide probes. An array consisting of oligonucleotides complementary to subsequences of a target sequence can be used to determine the identity of a target sequence, measure its amount, and detect differences between the target and a reference sequence. Nucleic acid molecules microarrays may also be screened with protein molecules or fragments thereof to determine nucleic acid molecules that specifically bind protein molecules or fragments thereof.

The microarray approach may be used with polypeptide targets (U.S. Patent No. 5,445,934; U.S. Patent No. 5,143,854; U.S. Patent No. 5,079,600; U.S. Patent No. 4,923,901, all of which are herein incorporated by reference in their entirety).

Essentially, polypeptides are synthesized on a substrate (microarray) and these

polypeptides can be screened with either protein molecules or fragments thereof or nucleic acid molecules in order to screen for either protein molecules or fragments thereof or nucleic acid molecules that specifically bind the target polypeptides. Implementation of these techniques rely on recently developed combinatorial technologies to generate any ordered array of a large number of oligonucleotide probes (Fodor *et al.*, *Science* 251:767-773 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the molecules of the present invention, preferably one or more of the nucleic acid molecules or protein molecules or fragments thereof of the present invention may be utilized in a microarray based method.

In a preferred embodiment of the present invention microarrays may be prepared
 5 that comprise nucleic acid molecules where preferably at least 10%, preferably at least 25%, more preferably at least 50% and even more preferably at least 75%, 80%, 85%, 90% or 95% of the nucleic acid molecules located on that array are selected from the group of nucleic acid molecules that specifically hybridize to one or more nucleic acid molecule having a nucleic acid sequence selected from the group of SEQ ID NO: 1
 10 through SEQ ID NO: 11840 or complement thereof or fragments of either.

A particular preferred microarray embodiment of the present invention is a microarray comprising nucleic acid molecules encoding genes or fragments thereof that are homologues of known genes or nucleic acid molecules that comprise genes or fragment thereof that elicit only limited or no matches to known genes. A further
 15 preferred microarray embodiment of the present invention is a microarray comprising nucleic acid molecules having genes or fragments thereof that are homologues of known genes and nucleic acid molecules that comprise genes or fragment thereof that elicit only limited or no matches to known genes. Site-directed mutagenesis may be utilized to modify nucleic acid sequences, particularly as it is a technique that allows one or more of
 20 the amino acids encoded by a nucleic acid molecule to be altered (e.g. a threonine to be replaced by a methionine). Three basic methods for site-directed mutagenesis are often employed. These are cassette mutagenesis (Wells *et al.*, *Gene* 34:315-23 (1985), the entirety of which is herein incorporated by reference), primer extension (Gilliam *et al.*, *Gene* 12:129-137 (1980), the entirety of which is herein incorporated by reference);
 25 Zoller and Smith, *Methods Enzymol.* 100:468-500 (1983), the entirety of which is herein incorporated by reference; and Dalbadie-McFarland *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 79:6409-6413 (1982), the entirety of which is herein incorporated by reference) and

methods based upon PCR (Scharf *et al.*, *Science* 233:1076-1078 (1986), the entirety of which is herein incorporated by reference; Higuchi *et al.*, *Nucleic Acids Res.* 16:7351-7367 (1988), the entirety of which is herein incorporated by reference). Site-directed mutagenesis approaches are also described in European Patent 0 385 962, the entirety of which is herein incorporated by reference, European Patent 0 359 472, the entirety of which is herein incorporated by reference, and PCT Patent Application WO 93/07278, the entirety of which is herein incorporated by reference.

Site-directed mutagenesis strategies have been applied to plants for both *in vitro* as well as *in vivo* site-directed mutagenesis (Lanz *et al.*, *J. Biol. Chem.* 266:9971-6 (1991), the entirety of which is herein incorporated by reference; Kovgan and Zhdanov, *Biokhnologiya* 5:148-154; No. 207160n, Chemical Abstracts 110:225 (1989), the entirety of which is herein incorporated by reference; Ge *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:4037-4041 (1989), the entirety of which is herein incorporated by reference, Zhu *et al.*, *J. Biol. Chem.* 271:18494-18498 (1996), Chu *et al.*, *Biochemistry* 33:6150-6157 (1994), the entirety of which is herein incorporated by reference, Small *et al.*, *EMBO J.* 11:1291-1296 (1992), the entirety of which is herein incorporated by reference, Cho *et al.*, *Mol. Biotechnol.* 8:13-16 (1997), Kita *et al.*, *J. Biol. Chem.* 271:26529-26535 (1996), the entirety of which is herein incorporated by reference, Jin *et al.*, *Mol. Microbiol.* 7:555-562 (1993), the entirety of which is herein incorporated by reference, Hatfield and Vierstra, *J. Biol. Chem.* 267:14799-14803 (1992), the entirety of which is herein incorporated by reference, Zhao *et al.*, *Biochemistry* 31:5093-5099 (1992), the entirety of which is herein incorporated by reference).

Any of the nucleic acid molecules of the present invention may either be modified by site-directed mutagenesis or used as, for example, nucleic acid molecules that are used to target other nucleic acid molecules for modification. It is understood that mutants with more than one altered nucleotide can be constructed using techniques that practitioners skilled in the art are familiar with such as isolating restriction fragments and ligating such

fragments into an expression vector (*see, for example, Sambrook et al., Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Press (1989)).

Sequence-specific DNA-binding proteins play a role in the regulation of transcription. The isolation of recombinant cDNAs encoding these proteins facilitates the biochemical analysis of their structural and functional properties. Genes encoding such DNA-binding proteins have been isolated using classical genetics (Vollbrecht *et al.*, *Nature* 350: 241-243 (1991), the entirety of which is herein incorporated by reference) and molecular biochemical approaches, including the screening of recombinant cDNA libraries with antibodies (Landschulz *et al.*, *Genes Dev.* 2: 786-800 (1988), the entirety of which is herein incorporated by reference) or DNA probes (Bodner *et al.*, *Cell* 55: 505-518 (1988), the entirety of which is herein incorporated by reference). In addition, an *in situ* screening procedure has been used and has facilitated the isolation of sequence-specific DNA-binding proteins from various plant species (Gilmartin *et al.*, *Plant Cell* 4: 839-849 (1992), the entirety of which is herein incorporated by reference; Schindler *et al.*, *EMBO J.* 11: 1261-1273 (1992) the entirety of which is herein incorporated by reference). An *in situ* screening protocol does not require the purification of the protein of interest (Vinson *et al.*, *Genes Dev.* 2: 801-806 (1988), the entirety of which is herein incorporated by reference; Singh *et al.*, *Cell* 52: 415-423 (1988), the entirety of which is herein incorporated by reference).

Steps may be employed to characterize DNA-protein interactions. The first is to identify promoter fragments that interact with DNA-binding proteins, to titrate binding activity, to determine the specificity of binding, and to determine whether a given DNA-binding activity can interact with related DNA sequences (Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, 2nd edition. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York (1989). Electrophoretic mobility-shift assay is a widely used assay. The assay provides a simple, rapid, and sensitive method for detecting DNA-binding proteins based on the observation that the mobility of a DNA fragment through a

nondenaturing, low-ionic strength polyacrylamide gel is retarded upon association with a DNA-binding protein (Fried and Crother, *Nucleic Acids Res.* 9: 6505-6525 (1981), the entirety of which is herein incorporated by reference). When one or more specific binding activities have been identified, the exact sequence of the DNA bound by the protein may be determined. Several procedures for characterizing protein/DNA-binding sites are used, including methylation and ethylation interference assays (Maxam and Gilbert, *Methods Enzymol.* 65: 499-560 (1980), the entirety of which is herein incorporated by reference; Wissman and Hillen, *Methods Enzymol.* 208: 365-379 (1991), the entirety of which is herein incorporated by reference) and footprinting techniques employing DNase I (Galas and Schmitz, *Nucleic Acids Res.* 5: 3157-3170 (1978), the entirety of which is herein incorporated by reference), 1,10-phenanthroline-copper ion methods (Sigman *et al.*, *Methods Enzymol.* 208: 365-379 (1991), the entirety of which is herein incorporated by reference) or hydroxyl radical methods (Dixon *et al.*, *Methods Enzymol.* 208: 380-413 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the nucleic acid molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention may be utilized to identify a protein or fragment thereof that specifically binds to a nucleic acid molecule of the present invention. It is also understood that one or more of the protein molecules or fragments thereof of the present invention may be utilized to identify a nucleic acid molecule that specifically binds to it.

The two-hybrid system is based on the fact that many cellular functions are carried out by proteins that interact (physically) with one another. Two-hybrid systems have been used to probe the function of new proteins (Chien *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88: 9578-9582 (1991) the entirety of which is herein incorporated by reference; Durfee *et al.*, *Genes Dev.* 7: 555-569 (1993) the entirety of which is herein incorporated by reference; Choi *et al.*, *Cell* 78: 499-512 (1994), the entirety of which is herein

incorporated by reference; Kranz *et al.*, *Genes Dev.* 8: 313-327 (1994), the entirety of which is herein incorporated by reference).

Interaction mating techniques have facilitated a number of two-hybrid studies of protein-protein interaction. Interaction mating has been used to examine interactions between small sets of tens of proteins (Finley and Brent, *Proc. Natl. Acad. Sci. (U.S.A.)* 91: 12098-12984 (1994), the entirety of which is herein incorporated by reference), larger sets of hundreds of proteins, (Bendixen *et al.*, *Nucl. Acids Res.* 22: 1778-1779 (1994), the entirety of which is herein incorporated by reference) and to comprehensively map proteins encoded by a small genome (Bartel *et al.*, *Nature Genetics* 12: 72-77 (1996), the entirety of which is herein incorporated by reference). This technique utilizes proteins fused to the DNA-binding domain and proteins fused to the activation domain. They are expressed in two different haploid yeast strains of opposite mating type, and the strains are mated to determine if the two proteins interact. Mating occurs when haploid yeast strains come into contact and result in the fusion of the two haploids into a diploid yeast strain. An interaction can be determined by the activation of a two-hybrid reporter gene in the diploid strain. The primary advantage of this technique is that it reduces the number of yeast transformations needed to test individual interactions. It is understood that the protein-protein interactions of protein or fragments thereof of the present invention may be investigated using the two-hybrid system and that any of the nucleic acid molecules of the present invention that encode such proteins or fragments thereof may be used to transform yeast in the two-hybrid system.

Synechocystis 6803 is a photosynthetic Cyanobacterium capable of oxygenic photosynthesis as well as heterotrophic growth in the absence of light. The entire genome has been sequenced, and it is reported to have a circular genome size of 3.57 Mbp containing 3168 potential open reading frames. Open reading frames (ORFs) were identified based upon their homology to other reported ORFs and by using ORF identification computer programs. Sixteen hundred potential ORFs were assigned based on their homology to previously identified ORFs.

Of these 1600 ORFs, 145 were identical to reported ORFs (Kaneko *et al.*, *DNA Research* 3:109-36 (1996), herein incorporated by reference in its entirety).

Several prokaryote promoters have been used in *Synechocystis* to express heterologous genes including the tac, lac, and lambda phage promoters (Bryant (ed.), *The Molecular Biology of Cyanobacteria*, Kluwer Academic Publishers, (1994); Ferino and Chauvat, *Gene* 84:257-266 (1989), both of which are herein incorporated by reference in their entirety). Several bacterial origins of replication such as RSF1010 and ACYC are reported to replicate in *Synechocystis* (Mermet-Bouvier and Chauvat, *Current Microbiology* 28:145-148 (1994); Kuhlemeier *et al.*, *Mol. Gen. Genet.* 184:249-254 (1981), both of which are herein incorporated by reference in their entirety).

Synechocystis has been used to study gene regulation by gene replacement through homologous recombination or by gene disruption using antibiotic resistance markers (Pakrasi *et al.*, *EMBO* 7:325-332 (1988), herein incorporated by reference in its entirety). In such gene regulation studies, double reciprocal homologous regions of the host genome flanking the gene of interest recombine to stably integrate the gene of interest into the genome. The gene of interest can be expressed once that gene has been stably integrated into the genome. Biochemical analysis can be performed to study the effect of the replaced or deleted gene.

It is understood that the agents of the present invention may be employed in a *Synechocystis* system.

Exogenous genetic material may be transferred into a plant cell and the plant cell regenerated into a whole, fertile or sterile plant. Exogenous genetic material is any genetic material, whether naturally occurring or otherwise, from any source that is capable of being inserted into any organism. Such genetic material may be transferred into either monocotyledons and dicotyledons including but not limited to the crops, maize and soybean (See specifically, Chistou, *Particle Bombardment for Genetic Engineering of Plants*, pp 63-69 (maize), pp50-60 (soybean), Biotechnology Intelligence Unit. Academic Press, San Diego, California (1996), the entirety of which is herein incorporated by

reference and generally Chistou, *Particle Bombardment for Genetic Engineering of Plants*, Biotechnology Intelligence Unit. Academic Press, San Diego, California (1996), the entirety of which is herein incorporated by reference).

Transfer of a nucleic acid that encodes for a protein can result in overexpression of that protein in a transformed cell or transgenic plant. One or more of the proteins or fragments thereof encoded by nucleic acid molecules of the present invention may be overexpressed in a transformed cell or transformed plant. Such overexpression may be the result of transient or stable transfer of the exogenous material.

Exogenous genetic material may be transferred into a plant cell by the use of a DNA vector or construct designed for such a purpose. Design of such a vector is generally within the skill of the art (*See*, Plant Molecular Biology: A Laboratory Manual eds. Clark, Springer, New York (1997), the entirety of which is herein incorporated by reference).

A construct or vector may include a plant promoter to express the protein or protein fragment of choice. A number of promoters which are active in plant cells have been described in the literature. These include the nopaline synthase (NOS) promoter (Ebert *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 84:5745-5749 (1987), the entirety of which is herein incorporated by reference), the octopine synthase (OCS) promoter (which are carried on tumor-inducing plasmids of *Agrobacterium tumefaciens*), the caulimovirus promoters such as the cauliflower mosaic virus (CaMV) 19S promoter (Lawton *et al.*, *Plant Mol. Biol.* 9:315-324 (1987), the entirety of which is herein incorporated by reference) and the CAMV 35S promoter (Odell *et al.*, *Nature* 313:810-812 (1985), the entirety of which is herein incorporated by reference), the figwort mosaic virus 35S-promoter, the light-inducible promoter from the small subunit of ribulose-1,5-bis-phosphate carboxylase (ssRUBISCO), the Adh promoter (Walker *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 84:6624-6628 (1987), the entirety of which is herein incorporated by reference), the sucrose synthase promoter (Yang *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*

87:4144-4148 (1990), the entirety of which is herein incorporated by reference), the R gene complex promoter (Chandler *et al.*, *The Plant Cell* 1:1175-1183 (1989), the entirety of which is herein incorporated by reference), and the chlorophyll a/b binding protein gene promoter, etc. These promoters have been used to create DNA constructs which
 5 have been expressed in plants; *see, e.g.*, PCT publication WO 84/02913, herein incorporated by reference in its entirety.

Promoters which are known or are found to cause transcription of DNA in plant cells can be used in the present invention. Such promoters may be obtained from a variety of sources such as plants and plant viruses. It is preferred that the particular
 10 promoter selected should be capable of causing sufficient expression to result in the production of an effective amount of a protein to cause the desired phenotype. In addition to promoters which are known to cause transcription of DNA in plant cells, other promoters may be identified for use in the current invention by screening a plant cDNA library for genes which are selectively or preferably expressed in the target tissues or
 15 cells.

For the purpose of expression in source tissues of the plant, such as the leaf, seed, root or stem, it is preferred that the promoters utilized in the present invention have relatively high expression in these specific tissues. For this purpose, one may choose from a number of promoters for genes with tissue- or cell-specific or -enhanced
 20 expression. Examples of such promoters reported in the literature include the chloroplast glutamine synthetase GS2 promoter from pea (Edwards *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:3459-3463 (1990), herein incorporated by reference in its entirety), the chloroplast fructose-1,6-biphosphatase (FBPase) promoter from wheat (Lloyd *et al.*, *Mol. Gen. Genet.* 225:209-216 (1991), herein incorporated by reference in its entirety), the
 25 nuclear photosynthetic ST-LS1 promoter from potato (Stockhaus *et al.*, *EMBO J.* 8:2445-2451 (1989), herein incorporated by reference in its entirety), the phenylalanine ammonia-lyase (PAL) promoter and the chalcone synthase (CHS) promoter from

Arabidopsis thaliana. Also reported to be active in photosynthetically active tissues are the ribulose-1,5-bisphosphate carboxylase (RbcS) promoter from eastern larch (*Larix laricina*), the promoter for the *cab* gene, *cab6*, from pine (Yamamoto *et al.*, *Plant Cell Physiol.* 35:773-778 (1994), herein incorporated by reference in its entirety), the promoter for the Cab-1 gene from wheat (Fejes *et al.*, *Plant Mol. Biol.* 15:921-932 (1990), herein incorporated by reference in its entirety), the promoter for the CAB-1 gene from spinach (Lubberstedt *et al.*, *Plant Physiol.* 104:997-1006 (1994), herein incorporated by reference in its entirety), the promoter for the *cab1R* gene from rice (Luan *et al.*, *Plant Cell.* 4:971-981 (1992), the entirety of which is herein incorporated by reference), the pyruvate, orthophosphate dikinase (PPDK) promoter from maize (Matsuoka *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 90: 9586-9590 (1993), herein incorporated by reference in its entirety), the promoter for the tobacco *Lhcb1*2* gene (Cerdan *et al.*, *Plant Mol. Biol.* 33: 245-255. (1997), herein incorporated by reference in its entirety), the *Arabidopsis thaliana* SUC2 sucrose-H⁺ symporter promoter (Truernit *et al.*, *Planta.* 196: 564-570 (1995), herein incorporated by reference in its entirety), and the promoter for the thylacoid membrane proteins from spinach (*psaD*, *psaF*, *psaE*, *PC*, *FNR*, *atpC*, *atpD*, *cab*, *rbcS*). Other promoters for the chlorophyll a/b-binding proteins may also be utilized in the present invention, such as the promoters for *LhcB* gene and *PsbP* gene from white mustard (*Sinapis alba*; Kretsch *et al.*, *Plant Mol. Biol.* 28: 219-229 (1995), the entirety of which is herein incorporated by reference).

For the purpose of expression in sink tissues of the plant, such as the tuber of the potato plant, the fruit of tomato, or the seed of maize, wheat, rice, and barley, it is preferred that the promoters utilized in the present invention have relatively high expression in these specific tissues. A number of promoters for genes with tuber-specific or -enhanced expression are known, including the class I patatin promoter (Bevan *et al.*, *EMBO J.* 8: 1899-1906 (1986); Jefferson *et al.*, *Plant Mol. Biol.* 14: 995-1006 (1990), both of which are herein incorporated by reference in its entirety), the promoter for the

potato tuber ADPGPP genes, both the large and small subunits, the sucrose synthase promoter (Salanoubat and Belliard, *Gene*. 60: 47-56 (1987), Salanoubat and Belliard, *Gene*. 84: 181-185 (1989), both of which are incorporated by reference in their entirety), the promoter for the major tuber proteins including the 22 kd protein complexes and proteinase inhibitors (Hannapel, *Plant Physiol.* 101: 703-704 (1993), herein incorporated by reference in its entirety), the promoter for the granule bound starch synthase gene (GBSS) (Visser *et al.*, *Plant Mol. Biol.* 17: 691-699 (1991), herein incorporated by reference in its entirety), and other class I and II patatins promoters (Koster-Topfer *et al.*, *Mol Gen Genet.* 219: 390-396 (1989); Mignery *et al.*, *Gene*. 62: 27-44 (1988), both of which are herein incorporated by reference in their entirety).

Other promoters can also be used to express a fructose 1,6 biphosphate aldolase gene in specific tissues, such as seeds or fruits. The promoter for β -conglycinin (Chen *et al.*, *Dev. Genet.* 10: 112-122 (1989), herein incorporated by reference in its entirety) or other seed-specific promoters such as the napin and phaseolin promoters, can be used.

The zeins are a group of storage proteins found in maize endosperm. Genomic clones for zein genes have been isolated (Pedersen *et al.*, *Cell* 29: 1015-1026 (1982), herein incorporated by reference in its entirety), and the promoters from these clones, including the 15 kD, 16 kD, 19 kD, 22 kD, 27 kD, and gamma genes, could also be used. Other promoters known to function, for example, in maize, include the promoters for the following genes: *waxy*, *Brittle*, *Shrunken 2*, Branching enzymes I and II, starch synthases, debranching enzymes, oleosins, glutelins, and sucrose synthases. A particularly preferred promoter for maize endosperm expression is the promoter for the glutelin gene from rice, more particularly the Osgt-1 promoter (Zheng *et al.*, *Mol. Cell Biol.* 13: 5829-5842 (1993), herein incorporated by reference in its entirety). Examples of promoters suitable for expression in wheat include those promoters for the ADPglucose pyrophosphorylase (ADPGPP) subunits, the granule bound and other starch synthases, the branching and debranching enzymes, the embryogenesis-abundant proteins, the gliadins, and the

glutenins. Examples of such promoters in rice include those promoters for the ADPGPP subunits, the granule bound and other starch synthases, the branching enzymes, the debranching enzymes, sucrose synthases, and the glutelins. A particularly preferred promoter is the promoter for rice glutelin, Osgt-1. Examples of such promoters for barley

5 include those for the ADPGPP subunits, the granule bound and other starch synthases, the branching enzymes, the debranching enzymes, sucrose synthases, the hordeins, the embryo globulins, and the aleurone specific proteins.

Root specific promoters may also be used. An example of such a promoter is the promoter for the acid chitinase gene (Samac *et al.*, *Plant Mol. Biol.* 25: 587-596 (1994),

10 the entirety of which is herein incorporated by reference). Expression in root tissue could also be accomplished by utilizing the root specific subdomains of the CaMV35S promoter that have been identified (Lam *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:7890-7894 (1989), herein incorporated by reference in its entirety). Other root cell specific promoters include those reported by Conkling *et al.* (Conkling *et al.*, *Plant Physiol.*

15 93:1203-1211 (1990), the entirety of which is herein incorporated by reference).

Additional promoters that may be utilized are described, for example, in U.S. Patent Nos. 5,378,619, 5,391,725, 5,428,147, 5,447,858, 5,608,144, 5,608,144, 5,614,399, 5,633,441, 5,633,435, and 4,633,436, all of which are herein incorporated in their entirety. In addition, a tissue specific enhancer may be used (Fromm *et al.*, *The*

20 *Plant Cell* 1:977-984 (1989), the entirety of which is herein incorporated by reference).

Constructs or vectors may also include, with the coding region of interest, a nucleic acid sequence that acts, in whole or in part, to terminate transcription of that region. For example, such sequences have been isolated including the Tr7 3' sequence and the nos 3' sequence (Ingelbrecht *et al.*, *The Plant Cell* 1:671-680 (1989), the entirety

25 of which is herein incorporated by reference; Bevan *et al.*, *Nucleic Acids Res.* 11:369-385 (1983), the entirety of which is herein incorporated by reference), or the like.

A vector or construct may also include regulatory elements. Examples of such include the Adh intron 1 (Callis *et al.*, *Genes and Develop.* 1:1183-1200 (1987), the entirety of which is herein incorporated by reference), the sucrose synthase intron (Vasil *et al.*, *Plant Physiol.* 91:1575-1579 (1989), the entirety of which is herein incorporated by reference) and the TMV omega element (Gallie *et al.*, *The Plant Cell* 1:301-311 (1989), the entirety of which is herein incorporated by reference). These and other regulatory elements may be included when appropriate.

A vector or construct may also include a selectable marker. Selectable markers may also be used to select for plants or plant cells that contain the exogenous genetic material. Examples of such include, but are not limited to, a neo gene (Potrykus *et al.*, *Mol. Gen. Genet.* 199:183-188 (1985), the entirety of which is herein incorporated by reference) which codes for kanamycin resistance and can be selected for using kanamycin, G418, etc.; a bar gene which codes for bialaphos resistance; a mutant EPSP synthase gene (Hinchee *et al.*, *Bio/Technology* 6:915-922 (1988), the entirety of which is herein incorporated by reference) which encodes glyphosate resistance; a nitrilase gene which confers resistance to bromoxynil (Stalker *et al.*, *J. Biol. Chem.* 263:6310-6314 (1988), the entirety of which is herein incorporated by reference); a mutant acetolactate synthase gene (ALS) which confers imidazolinone or sulphonylurea resistance (European Patent Application 154,204 (Sept. 11, 1985), the entirety of which is herein incorporated by reference); and a methotrexate resistant DHFR gene (Thillet *et al.*, *J. Biol. Chem.* 263:12500-12508 (1988), the entirety of which is herein incorporated by reference).

A vector or construct may also include a transit peptide. Incorporation of a suitable chloroplast transit peptide may also be employed (European Patent Application Publication Number 0218571, the entirety of which is herein incorporated by reference).

Translational enhancers may also be incorporated as part of the vector DNA. DNA constructs could contain one or more 5' non-translated leader sequences which may serve to enhance expression of the gene products from the resulting mRNA transcripts. Such

sequences may be derived from the promoter selected to express the gene or can be specifically modified to increase translation of the mRNA. Such regions may also be obtained from viral RNAs, from suitable eukaryotic genes, or from a synthetic gene sequence. For a review of optimizing expression of transgenes, see Koziel *et al.*, *Plant*
 5 *Mol. Biol.* 32:393-405 (1996), the entirety of which is herein incorporated by reference.

A vector or construct may also include a screenable marker. Screenable markers may be used to monitor expression. Exemplary screenable markers include a β -glucuronidase or uidA gene (GUS) which encodes an enzyme for which various chromogenic substrates are known (Jefferson, *Plant Mol. Biol. Rep.* 5: 387-405 (1987),
 10 the entirety of which is herein incorporated by reference; Jefferson *et al.*, *EMBO J.* 6: 3901-3907 (1987), the entirety of which is herein incorporated by reference); an R-locus gene, which encodes a product that regulates the production of anthocyanin pigments (red color) in plant tissues ((Dellaporta *et al.*, *Stadler Symposium 11*:263-282 (1988), the entirety of which is herein incorporated by reference); a β -lactamase gene (Sutcliffe *et al.*,
 15 *Proc. Natl. Acad. Sci. (U.S.A.)* 75: 3737-3741 (1978), the entirety of which is herein incorporated by reference), a gene which encodes an enzyme for which various chromogenic substrates are known (e.g., PADAC, a chromogenic cephalosporin); a luciferase gene (Ow *et al.*, *Science* 234: 856-859 (1986), the entirety of which is herein incorporated by reference) a xyle gene (Zukowsky *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*
 20 80:1101-1105 (1983), the entirety of which is herein incorporated by reference) which encodes a catechol dioxygenase that can convert chromogenic catechols; an α -amylase gene (Ikata *et al.*, *Bio/Technol.* 8:241-242 (1990), the entirety of which is herein incorporated by reference); a tyrosinase gene (Katz *et al.*, *J. Gen. Microbiol.* 129:2703-2714 (1983), the entirety of which is herein incorporated by reference) which encodes an
 25 enzyme capable of oxidizing tyrosine to DOPA and dopaquinone which in turn condenses to melanin; an α -galactosidase, which will turn a chromogenic α -galactose substrate.

Included within the terms “selectable or screenable marker genes” are also genes which encode a scriptable marker whose secretion can be detected as a means of identifying or selecting for transformed cells. Examples include markers which encode a secretable antigen that can be identified by antibody interaction, or even secretable enzymes which can be detected catalytically. Secretable proteins fall into a number of classes, including small, diffusible proteins detectable, *e.g.*, by ELISA, small active enzymes detectable in extracellular solution (*e.g.*, α -amylase, β -lactamase, phosphinothricin transferase), or proteins which are inserted or trapped in the cell wall (such as proteins which include a leader sequence such as that found in the expression unit of extension or tobacco PR-S). Other possible selectable and/or screenable marker genes will be apparent to those of skill in the art.

Methods and compositions for transforming a bacteria and other microorganisms are known in the art (see for example Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, Second Edition, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., (1989), the entirety of which is herein incorporated by reference).

There are many methods for introducing transforming nucleic acid molecules into plant cells. Suitable methods are believed to include virtually any method by which nucleic acid molecules may be introduced into a cell, such as by *Agrobacterium* infection or direct delivery of nucleic acid molecules such as, for example, by PEG-mediated transformation, by electroporation or by acceleration of DNA coated particles, etc. (Pottkyus, *Ann. Rev. Plant Physiol. Plant Mol. Biol.* 42:205-225 (1991), the entirety of which is herein incorporated by reference; Vasil, *Plant Mol. Biol.* 25: 925-937 (1994), the entirety of which is herein incorporated by reference. For example, electroporation has been used to transform maize protoplasts (Fromm *et al.*, *Nature* 312:791-793 (1986), the entirety of which is herein incorporated by reference).

Other vector systems suitable for introducing transforming DNA into a host plant cell includes but is not limited to binary artificial chromosome (BIBAC) vectors

(Hamilton *et al.*, *Gene* 200:107-116, (1997), the entirety of which is herein incorporated by reference, and transfection with RNA viral vectors (Della-Cioppa *et al.*, *Ann. N.Y. Acad. Sci.* (1996), 792 (Engineering Plants for Commercial Products and Applications), 57-61, the entirety of which is herein incorporated by reference.

5 Technology for introduction of DNA into cells is well known to those of skill in the art. Four general methods for delivering a gene into cells have been described: (1) chemical methods (Graham and van der Eb, *Virology*, 54:536-539 (1973), the entirety of which is herein incorporated by reference); (2) physical methods such as microinjection (Capecchi, *Cell* 22:479-488 (1980), electroporation (Wong and Neumann, *Biochem.*
10 *Biophys. Res. Commun.*, 107:584-587 (1982); Fromm *et al.*, *Proc. Natl. Acad. Sci. USA*, 82:5824-5828 (1985); U. S. Patent No. 5,384,253; and the gene gun (Johnston and Tang, *Methods Cell Biol.* 43:353-365 (1994), all of which the entirety is herein incorporated by reference; (3) viral vectors (Clapp, *Clin. Perinatol.*, 20:155-168 (1993); Lu *et al.*, *J. Exp. Med.*, 178:2089-2096 (1993); Eglitis and Anderson, *Biotechniques*, 6:608-614 (1988), all
15 of which the entirety is herein incorporated by reference); and (4) receptor-mediated mechanisms (Curiel *et al.*, *Hum. Gen. Ther.*, 3:147-154 (1992); Wagner *et al.*, *Proc. Natl. Acad. Sci. USA*, 89:6099-6103 (1992), all of which the entirety is herein incorporated by reference).

Acceleration methods that may be used include, for example, microprojectile
20 bombardment and the like. One example of a method for delivering transforming nucleic acid molecules to plant cells is microprojectile bombardment. This method has been reviewed by Yang and Christou, eds., *Particle Bombardment Technology for Gene Transfer*, Oxford Press, Oxford, England (1994), the entirety of which is herein incorporated by reference). Non-biological particles (microprojectiles) that may be
25 coated with nucleic acids and delivered into cells by a propelling force. Exemplary particles include those comprised of tungsten, gold, platinum, and the like.

A particular advantage of microprojectile bombardment, in addition to it being an effective means of reproducibly, and stably transforming monocotyledons, is that neither the isolation of protoplasts (Cristou *et al.*, *Plant Physiol.* 87:671-674 (1988), the entirety of which is herein incorporated by reference) nor the susceptibility of *Agrobacterium*

5 infection is required. An illustrative embodiment of a method for delivering DNA into maize cells by acceleration is a biolistics g-particle delivery system, which can be used to propel particles coated with DNA through a screen, such as a stainless steel or Nytex screen, onto a filter surface covered with corn cells cultured in suspension. Gordon-Kamm *et al.*, describes the basic procedure for coating tungsten particles with DNA
10 (Gordon-Kamm *et al.*, *Plant Cell* 2: 603-618 (1990), the entirety of which is herein incorporated by reference). The screen disperses the tungsten nucleic acid particles so that they are not delivered to the recipient cells in large aggregates. A particle delivery system suitable for use with the present invention is the helium acceleration PDS-1000/He gun which is available from Bio-Rad Laboratories (Bio-Rad, Hercules,
15 California)(Sanford *et al.*, *Technique* 3:3-16 (1991), the entirety of which is herein incorporated by reference).

For the bombardment, cells in suspension may be concentrated on filters. Filters containing the cells to be bombarded are positioned at an appropriate distance below the microprojectile stopping plate. If desired, one or more screens are also positioned
20 between the gun and the cells to be bombarded.

Alternatively, immature embryos or other target cells may be arranged on solid culture medium. The cells to be bombarded are positioned at an appropriate distance below the macroprojectile stopping plate. If desired, one or more screens are also positioned between the acceleration device and the cells to be bombarded. Through the
25 use of techniques set forth herein one may obtain up to 1000 or more foci of cells transiently expressing a marker gene. The number of cells in a focus which express the

exogenous gene product 48 hours post-bombardment often range from one to ten and average one to three.

In bombardment transformation, one may optimize the prebombardment culturing conditions and the bombardment parameters to yield the maximum numbers of stable transformants. Both the physical and biological parameters for bombardment are important in this technology. Physical factors are those that involve manipulating the DNA/microprojectile precipitate or those that affect the flight and velocity of either the macro- or microprojectiles. Biological factors include all steps involved in manipulation of cells before and immediately after bombardment, the osmotic adjustment of target cells to help alleviate the trauma associated with bombardment, and also the nature of the transforming DNA, such as linearized DNA or intact supercoiled plasmids. It is believed that pre-bombardment manipulations are especially important for successful transformation of immature embryos. In another alternative embodiment, plastids can be stably transformed. Methods disclosed for plastid transformation in higher plants include the particle gun delivery of DNA containing a selectable marker and targeting of the DNA to the plastid genome through homologous recombination (Svab *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:8526-8530 (1990); Svab and Maliga, *Proc. Natl. Acad. Sci. (U.S.A.)* 90:913-917 (1993); Staub and Maliga, *EMBO J.* 12:601-606 (1993); U.S. Patents 5, 451,513 and 5,545,818, all of which are herein incorporated by reference in their entirety).

Accordingly, it is contemplated that one may wish to adjust various aspects of the bombardment parameters in small scale studies to fully optimize the conditions. One may particularly wish to adjust physical parameters such as gap distance, flight distance, tissue distance, and helium pressure. One may also minimize the trauma reduction factors by modifying conditions which influence the physiological state of the recipient cells and which may therefore influence transformation and integration efficiencies. For example, the osmotic state, tissue hydration and the subculture stage or cell cycle of the

recipient cells may be adjusted for optimum transformation. The execution of other routine adjustments will be known to those of skill in the art in light of the present disclosure.

Agrobacterium-mediated transfer is a widely applicable system for introducing
 5 genes into plant cells because the DNA can be introduced into whole plant tissues, thereby bypassing the need for regeneration of an intact plant from a protoplast. The use of *Agrobacterium*-mediated plant integrating vectors to introduce DNA into plant cells is well known in the art. See, for example the methods described (Fraley *et al.*, *Biotechnology* 3:629-635 (1985); Rogers *et al.*, *Meth. In Enzymol.*, 153:253-277 (1987),
 10 both of which are herein incorporated by reference in their entirety. Further, the integration of the Ti-DNA is a relatively precise process resulting in few rearrangements. The region of DNA to be transferred is defined by the border sequences, and intervening DNA is usually inserted into the plant genome as described (Spielmann *et al.*, *Mol. Gen. Genet.*, 205:34 (1986), the entirety of which is herein incorporated by reference).

15 Modern *Agrobacterium* transformation vectors are capable of replication in *E. coli* as well as *Agrobacterium*, allowing for convenient manipulations as described (Klee *et al.*, In: *Plant DNA Infectious Agents*, T. Hohn and J. Schell, eds., Springer-Verlag, New York, pp. 179-203 (1985), the entirety of which is herein incorporated by reference. Moreover, recent technological advances in vectors for *Agrobacterium*-mediated gene
 20 transfer have improved the arrangement of genes and restriction sites in the vectors to facilitate construction of vectors capable of expressing various polypeptide coding genes. The vectors described have convenient multi-linker regions flanked by a promoter and a polyadenylation site for direct expression of inserted polypeptide coding genes and are suitable for present purposes (Rogers *et al.*, *Meth. In Enzymol.*, 153:253-277 (1987), the
 25 entirety of which is herein incorporated by reference). In addition, *Agrobacterium* containing both armed and disarmed Ti genes can be used for the transformations. In

those plant strains where *Agrobacterium*-mediated transformation is efficient, it is the method of choice because of the facile and defined nature of the gene transfer.

A transgenic plant formed using *Agrobacterium* transformation methods typically contains a single gene on one chromosome. Such transgenic plants can be referred to as being heterozygous for the added gene. More preferred is a transgenic plant that is homozygous for the added structural gene; *i.e.*, a transgenic plant that contains two added genes, one gene at the same locus on each chromosome of a chromosome pair. A homozygous transgenic plant can be obtained by sexually mating (selfing) an independent segregant transgenic plant that contains a single added gene, germinating some of the seed produced and analyzing the resulting plants produced for the gene of interest.

It is also to be understood that two different transgenic plants can also be mated to produce offspring that contain two independently segregating added, exogenous genes. Selfing of appropriate progeny can produce plants that are homozygous for both added, exogenous genes that encode a polypeptide of interest. Back-crossing to a parental plant and out-crossing with a non-transgenic plant are also contemplated, as is vegetative propagation.

Transformation of plant protoplasts can be achieved using methods based on calcium phosphate precipitation, polyethylene glycol treatment, electroporation, and combinations of these treatments. See for example (Potrykus *et al.*, *Mol. Gen. Genet.*, 205:193-200 (1986); Lorz *et al.*, *Mol. Gen. Genet.*, 199:178, (1985); Fromm *et al.*, *Nature*, 319:791,(1986); Uchimiya *et al.*, *Mol. Gen. Genet.*:204:204, (1986); Callis *et al.*, *Genes and Development*, 1183,(1987); Marcotte *et al.*, *Nature*, 335:454, (1988), all of which the entirety is herein incorporated by reference).

Application of these systems to different plant strains depends upon the ability to regenerate that particular plant strain from protoplasts. Illustrative methods for the regeneration of cereals from protoplasts are described (Fujimura *et al.*, *Plant Tissue*

Culture Letters, 2:74,(1985); Toriyama *et al.*, *Theor Appl. Genet.* 205:34. (1986); Yamada *et al.*, *Plant Cell Rep.*, 4:85, (1986); Abdullah *et al.*, *Biotechnology*, 4:1087, (1986), all of which the entirety is herein incorporated by reference).

To transform plant strains that cannot be successfully regenerated from protoplasts, other ways to introduce DNA into intact cells or tissues can be utilized. For example, regeneration of cereals from immature embryos or explants can be effected as described (Vasil, *Biotechnology*, 6:397,(1988), the entirety of which is herein incorporated by reference). In addition, "particle gun" or high-velocity microprojectile technology can be utilized (Vasil *et al.*, *Bio/Technology* 10:667, (1992), the entirety of which is herein incorporated by reference).

Using the latter technology, DNA is carried through the cell wall and into the cytoplasm on the surface of small metal particles as described (Klein *et al.*, *Nature*, 328:70, (1987); Klein *et al.*, *Proc. Natl. Acad. Sci. USA*, 85:8502-8505, (1988); McCabe *et al.*, *Biotechnology*, 6:923, (1988), all of which the entirety is herein incorporated by reference). The metal particles penetrate through several layers of cells and thus allow the transformation of cells within tissue explants.

Other methods of cell transformation can also be used and include but are not limited to introduction of DNA into plants by direct DNA transfer into pollen (Hess *et al.*, *Intern Rev. Cytol.*, 107:367, (1987); Luo *et al.*, *Plant Mol Biol. Reporter*, 6:165, (1988), all of which the entirety is herein incorporated by reference), by direct injection of DNA into reproductive organs of a plant (Pena *et al.*, *Nature*, 325:274, (1987), the entirety of which is herein incorporated by reference), or by direct injection of DNA into the cells of immature embryos followed by the rehydration of dessicated embryos (Neuhaus *et al.*, *Theor. Appl. Genet.*, 75:30, (1987), the entirety of which is herein incorporated by reference).

The regeneration, development, and cultivation of plants from single plant protoplast transformants or from various transformed explants is well known in the art

(Weissbach and Weissbach, *In: Methods for Plant Molecular Biology*, (Eds.), Academic Press, Inc. San Diego, CA, (1988), the entirety of which is herein incorporated by reference). This regeneration and growth process typically includes the steps of selection of transformed cells, culturing those individualized cells through the usual stages of embryonic development through the rooted plantlet stage. Transgenic embryos and seeds are similarly regenerated. The resulting transgenic rooted shoots are thereafter planted in an appropriate plant growth medium such as soil.

The development or regeneration of plants containing the foreign, exogenous gene that encodes a protein of interest is well known in the art. Preferably, the regenerated plants are self-pollinated to provide homozygous transgenic plants, as discussed before. Otherwise, pollen obtained from the regenerated plants is crossed to seed-grown plants of agronomically important lines. Conversely, pollen from plants of these important lines is used to pollinate regenerated plants. A transgenic plant of the present invention containing a desired polypeptide is cultivated using methods well known to one skilled in the art.

There are a variety of methods for the regeneration of plants from plant tissue. The particular method of regeneration will depend on the starting plant tissue and the particular plant species to be regenerated.

Methods for transforming dicots, primarily by use of *Agrobacterium tumefaciens*, and obtaining transgenic plants have been published for cotton (U. S. Patent No. 5,004,863, U.S. Patent No. 5,159,135, U.S. Patent No. 5,518,908, all of which the entirety is herein incorporated by reference); soybean (U. S. Patent No. 5,569,834, U. S. Patent No. 5,416,011, McCabe *et al.*, *Biotechnology* 6:923, (1988), Christou *et al.*, *Plant Physiol.*, 87:671-674 (1988), all of which the entirety is herein incorporated by reference); *Brassica* (U. S. Patent No. 5,463,174, the entirety of which is herein incorporated by reference); peanut (Cheng *et al.*, *Plant Cell Rep.* 15: 653-657 (1996), McKently *et al.*, *Plant Cell Rep.* 14:699-703 (1995), all of which the entirety is herein

incorporated by reference); papaya (Yang *et al.*, (1996), the entirety of which is herein incorporated by reference); pea (Grant *et al.*, *Plant Cell Rep.* 15:254-258, (1995), the entirety of which is herein incorporated by reference).

Transformation of monocotyledons using electroporation, particle bombardment, and *Agrobacterium* have also been reported. Transformation and plant regeneration have been achieved in asparagus (Bytebier *et al.*, *Proc. Natl. Acad. Sci. USA* 84:5345, (1987), the entirety of which is herein incorporated by reference); barley (Wan and Lemaux, *Plant Physiol* 104:37, (1994), the entirety of which is herein incorporated by reference); maize (Rhodes *et al.*, *Science* 240: 204, (1988), Gordon-Kamm *et al.*, *Plant Cell*, 2:603, (1990), Fromm *et al.*, *Bio/Technology* 8:833, (1990), Koziel *et al.*, *Bio/Technology* 11:194, (1993), Armstrong *et al.*, *Crop Science* 35:550-557, (1995), all of which the entirety is herein incorporated by reference); oat (Somers *et al.*, *Bio/Technology*, 10:1589, (1992), the entirety of which is herein incorporated by reference); orchardgrass (Horn *et al.*, *Plant Cell Rep.* 7:469, (1988), the entirety of which is herein incorporated by reference); rice (Toriyama *et al.*, *Theor Appl. Genet.* 205:34, (1986); Park *et al.*, *Plant Mol. Biol.*, 32: 1135-1148, (1996); Abedinia *et al.*, *Aust. J. Plant Physiol.* 24:133-141, (1997); Zhang and Wu, *Theor. Appl. Genet.* 76:835, (1988); Zhang *et al.* *Plant Cell Rep.* 7:379, (1988); Battraw and Hall, *Plant Sci.* 86:191-202, (1992); Christou *et al.*, *Bio/Technology* 9:957, (1991), all of which the entirety is herein incorporated by reference); sugarcane (Bower and Birch, *Plant J.* 2:409, (1992), the entirety of which is herein incorporated by reference); tall fescue (Wang *et al.*, *Bio/Technology* 10:691, (1992), the entirety of which is herein incorporated by reference), and wheat (Vasil *et al.*, *Bio/Technology* 10:667, (1992), the entirety of which is herein incorporated by reference; U. S. Patent No. 5,631,152, the entirety of which is herein incorporated by reference.

Assays for gene expression based on the transient expression of cloned nucleic acid constructs have been developed by introducing the nucleic acid molecules into plant cells by polyethylene glycol treatment, electroporation, or particle bombardment

(Marcotte, *et al.*, *Nature*, 335: 454-457 (1988), the entirety of which is herein incorporated by reference; Marcotte, *et al.*, *Plant Cell*, 1: 523-532 (1989), the entirety of which is herein incorporated by reference; McCarty, *et al.*, *Cell* 66: 895-905 (1991), the entirety of which is herein incorporated by reference; Hattori, *et al.*, *Genes Dev.* 6: 609-618 (1992), the entirety of which is herein incorporated by reference; Goff, *et al.*, *EMBO J.* 9: 2517-2522 (1990), the entirety of which is herein incorporated by reference).

Transient expression systems may be used to functionally dissect gene constructs (*See generally*, Mailga *et al.*, *Methods in Plant Molecular Biology*, Cold Spring Harbor Press (1995)).

Any of the nucleic acid molecules of the present invention may be introduced into a plant cell in a permanent or transient manner in combination with other genetic elements such as vectors, promoters enhancers etc. Further any of the nucleic acid molecules of the present invention may be introduced into a plant cell in a manner that allows for over expression of the protein or fragment thereof encoded by the nucleic acid molecule.

Cosuppression is the reduction in expression levels, usually at the level of RNA, of a particular endogenous gene or gene family by the expression of a homologous sense construct that is capable of transcribing mRNA of the same strandedness as the transcript of the endogenous gene (Napoli *et al.*, *Plant Cell* 2: 279-289 (1990), the entirety of which is herein incorporated by reference; van der Krol *et al.*, *Plant Cell* 2: 291-299 (1990), the entirety of which is herein incorporated by reference). Cosuppression may result from stable transformation with a single copy nucleic acid molecule that is homologous to a nucleic acid sequence found with the cell (Prolls and Meyer, *Plant J.* 2:465-475 (1992), the entirety of which is herein incorporated by reference) or with multiple copies of a nucleic acid molecule that is homologous to a nucleic acid sequence found with the cell (Mittlesten *et al.*, *Mol. Gen. Genet.* 244: 325-330 (1994), the entirety of which is herein incorporated by reference). Genes, even though different, linked to homologous

promoters may result in the cosuppression of the linked genes (Vaucheret, *C.R. Acad. Sci. III* 316: 1471-1483 (1993), the entirety of which is herein incorporated by reference).

This technique has, for example been applied to generate white flowers from red petunia and tomatoes that do not ripen on the vine. Up to 50% of petunia transformants that contained a sense copy of the chalcone synthase (CHS) gene produced white flowers or floral sectors; this was as a result of the post-transcriptional loss of mRNA encoding CHS (Flavell, *Proc. Natl. Acad. Sci. (U.S.A.)* 91:3490-3496 (1994)), the entirety of which is herein incorporated by reference). Cosuppression may require the coordinate transcription of the transgene and the endogenous gene, and can be reset by a developmental control mechanism (Jorgensen, *Trends Biotechnol.* 8:340-344 (1990), the entirety of which is herein incorporated by reference; Meins and Kunz, In: *Gene Inactivation and Homologous Recombination in Plants* (Paszkowski, J., ed.), pp. 335-348. Kluwer Academic, Netherlands (1994), the entirety of which is herein incorporated by reference).

It is understood that one or more of the nucleic acids of the present invention including those comprising SEQ ID NO:1 through SEQ ID NO:11840 or complement thereof or fragments of either or other nucleic acid molecules of the present invention may be introduced into a plant cell and transcribed using an appropriate promoter with such transcription resulting in the co-suppression of an endogenous protein.

Antisense approaches are a way of preventing or reducing gene function by targeting the genetic material (Mol *et al.*, *FEBS Lett.* 268: 427-430 (1990), the entirety of which is herein incorporated by reference). The objective of the antisense approach is to use a sequence complementary to the target gene to block its expression and create a mutant cell line or organism in which the level of a single chosen protein is selectively reduced or abolished. Antisense techniques have several advantages over other 'reverse genetic' approaches. The site of inactivation and its developmental effect can be manipulated by the choice of promoter for antisense genes or by the timing of external

application or microinjection. Antisense can manipulate its specificity by selecting either unique regions of the target gene or regions where it shares homology to other related genes (Hiatt *et al.*, *In Genetic Engineering*, Setlow (ed.), Vol. 11, New York: Plenum 49-63 (1989), the entirety of which is herein incorporated by reference).

5 The principle of regulation by antisense RNA is that RNA that is complementary to the target mRNA is introduced into cells, resulting in specific RNA:RNA duplexes being formed by base pairing between the antisense substrate and the target mRNA (Green *et al.*, *Annu. Rev. Biochem.* 55: 569-597 (1986), the entirety of which is herein incorporated by reference). Under one embodiment, the process involves the introduction
10 and expression of an antisense gene sequence. Such a sequence is one in which part or all of the normal gene sequences are placed under a promoter in inverted orientation so that the 'wrong' or complementary strand is transcribed into a noncoding antisense RNA that hybridizes with the target mRNA and interferes with its expression (Takayama and Inouye, *Crit. Rev. Biochem. Mol. Biol.* 25: 155-184 (1990), the entirety of which is herein
15 incorporated by reference). An antisense vector is constructed by standard procedures and introduced into cells by transformation, transfection, electroporation, microinjection, or by infection, etc. The type of transformation and choice of vector will determine whether expression is transient or stable. The promoter used for the antisense gene may influence the level, timing, tissue, specificity, or inducibility of the antisense inhibition.

20 It is understood that protein synthesis activity in a plant cell may be reduced or depressed by growing a transformed plant cell containing a nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof.

 Antibodies have been expressed in plants (Hiatt *et al.*, *Nature* 342:76-78 (1989), the entirety of which is herein incorporated by reference; Conrad and Fielder, *Plant Mol.*
25 *Biol.* 26: 1023-1030 (1994), the entirety of which is herein incorporated by reference). Cytoplasmic expression of a scFv (single-chain Fv antibodies) has been reported to delay infection by artichoke mottled crinkle virus. Transgenic plants that express antibodies

directed against endogenous proteins may exhibit a physiological effect (Philips *et al.*, *EMBO J.* 16: 4489-4496 (1997), the entirety of which is herein incorporated by reference; Marion-Poll, *Trends in Plant Science* 2: 447-448 (1997), the entirety of which is herein incorporated by reference). For example, expressed anti-abscisic antibodies reportedly
 5 result in a general perturbation of seed development (Philips *et al.*, *EMBO J.* 16: 4489-4496 (1997)).

Antibodies that are catalytic may also be expressed in plants (abzymes). The principle behind abzymes is that since antibodies may be raised against many molecules, this recognition ability can be directed toward generating antibodies that bind transition
 10 states to force a chemical reaction forward (Persidas, *Nature Biotechnology* 15:1313-1315 (1997), the entirety of which is herein incorporated by reference; Baca *et al.*, *Ann. Rev. Biophys. Biomol. Struct.* 26:461-493 (1997), the entirety of which is herein incorporated by reference). The catalytic abilities of abzymes may be enhanced by site directed mutagenesis. Examples of abzymes are, for example, set forth in U.S. Patent No:
 15 5,658,753; U.S. Patent No. 5,632,990; U.S. Patent No. 5,631,137; U.S. Patent 5,602,015; U.S. Patent No. 5,559,538; U.S. Patent No. 5,576,174; U.S. Patent No. 5,500,358; U.S. Patent 5,318,897; U.S. Patent No. 5,298,409; U.S. Patent No. 5,258,289 and U.S. Patent No. 5,194,585, all of which are herein incorporated in their entirety.

It is understood that any of the antibodies of the present invention may be
 20 expressed in plants and that such expression can result in a physiological effect. It is also understood that any of the expressed antibodies may be catalytic.

In addition to the above discussed procedures, practitioners are familiar with the standard resource materials which describe specific conditions and procedures for the construction, manipulation and isolation of macromolecules (e.g., DNA molecules,
 25 plasmids, etc.), generation of recombinant organisms and the screening and isolating of clones, (see for example, Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Press (1989); Mailga *et al.*, *Methods in Plant Molecular Biology*,

Cold Spring Harbor Press (1995), the entirety of which is herein incorporated by reference; Birren *et al.*, *Genome Analysis: Analyzing DNA*, 1, Cold Spring Harbor, New York, the entirety of which is herein incorporated by reference).

The nucleotide sequence provided in SEQ ID NO:1, through SEQ ID NO:11840 or fragment thereof, or complement thereof, or a nucleotide sequence at least 90% identical, preferably 95%, identical even more preferably 99% or 100% identical to the sequence provided in SEQ ID NO:1 through SEQ ID NO:11840 or fragment thereof, or complement thereof, can be "provided" in a variety of mediums to facilitate use fragment thereof. Such a medium can also provide a subset thereof in a form that allows a skilled artisan to examine the sequences.

In one application of this embodiment, a nucleotide sequence of the present invention can be recorded on computer readable media. As used herein, "computer readable media" refers to any medium that can be read and accessed directly by a computer. Such media include, but are not limited to: magnetic storage media, such as floppy discs, hard disc, storage medium, and magnetic tape; optical storage media such as CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories such as magnetic/optical storage media. A skilled artisan can readily appreciate how any of the presently known computer readable mediums can be used to create a manufacture comprising computer readable medium having recorded thereon a nucleotide sequence of the present invention.

As used herein, "recorded" refers to a process for storing information on computer readable medium. A skilled artisan can readily adopt any of the presently known methods for recording information on computer readable medium to generate media comprising the nucleotide sequence information of the present invention. A variety of data storage structures are available to a skilled artisan for creating a computer readable medium having recorded thereon a nucleotide sequence of the present invention. The choice of the data storage structure will generally be based on the means chosen to access

the stored information. In addition, a variety of data processor programs and formats can be used to store the nucleotide sequence information of the present invention on computer readable medium. The sequence information can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and

5 Microsoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like. A skilled artisan can readily adapt any number of data processor structuring formats (e.g. text file or database) in order to obtain computer readable medium having recorded thereon the nucleotide sequence information of the present invention.

10 By providing one or more of nucleotide sequences of the present invention, a skilled artisan can routinely access the sequence information for a variety of purposes. Computer software is publicly available which allows a skilled artisan to access sequence information provided in a computer readable medium. The examples which follow demonstrate how software which implements the BLAST (Altschul *et al.*, *J. Mol. Biol.* 215:403-410 (1990)) and BLAZE (Brutlag *et al.*, *Comp. Chem.* 17:203-207 (1993), the

15 entirety of which is herein incorporated by reference) search algorithms on a Sybase system can be used to identify open reading frames (ORFs) within the genome that contain homology to ORFs or proteins from other organisms. Such ORFs are protein-encoding fragments within the sequences of the present invention and are useful in

20 producing commercially important proteins such as enzymes used in amino acid biosynthesis, metabolism, transcription, translation, RNA processing, nucleic acid and a protein degradation, protein modification, and DNA replication, restriction, modification, recombination, and repair.

The present invention further provides systems, particularly computer-based

25 systems, which contain the sequence information described herein. Such systems are designed to identify commercially important fragments of the nucleic acid molecule of the present invention. As used herein, "a computer-based system" refers to the hardware

means, software means, and data storage means used to analyze the nucleotide sequence information of the present invention. The minimum hardware means of the computer-based systems of the present invention comprises a central processing unit (CPU), input means, output means, and data storage means. A skilled artisan can readily appreciate that any one of the currently available computer-based system are suitable for use in the present invention.

As indicated above, the computer-based systems of the present invention comprise a data storage means having stored therein a nucleotide sequence of the present invention and the necessary hardware means and software means for supporting and implementing a search means. As used herein, "data storage means" refers to memory that can store nucleotide sequence information of the present invention, or a memory access means which can access manufactures having recorded thereon the nucleotide sequence information of the present invention. As used herein, "search means" refers to one or more programs which are implemented on the computer-based system to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the sequence of the present invention that match a particular target sequence or target motif. A variety of known algorithms are disclosed publicly and a variety of commercially available software for conducting search means are available and can be used in the computer-based systems of the present invention. Examples of such software include, but are not limited to, MacPattern (EMBL), BLASTIN and BLASTIX (NCBIA). One of the available algorithms or implementing software packages for conducting homology searches can be adapted for use in the present computer-based systems.

The most preferred sequence length of a target sequence is from about 10 to 100 amino acids or from about 30 to 300 nucleotide residues. However, it is well recognized that during searches for commercially important fragments of the nucleic acid molecules

of the present invention, such as sequence fragments involved in gene expression and protein processing, may be of shorter length.

As used herein, "a target structural motif," or "target motif," refers to any rationally selected sequence or combination of sequences in which the sequences or sequence(s) are chosen based on a three-dimensional configuration which is formed upon the folding of the target motif. There are a variety of target motifs known in the art. Protein target motifs include, but are not limited to, enzymatic active sites and signal sequences. Nucleic acid target motifs include, but are not limited to, promoter sequences, cis elements, hairpin structures and inducible expression elements (protein binding sequences).

Thus, the present invention further provides an input means for receiving a target sequence, a data storage means for storing the target sequences of the present invention sequence identified using a search means as described above, and an output means for outputting the identified homologous sequences. A variety of structural formats for the input and output means can be used to input and output information in the computer-based systems of the present invention. A preferred format for an output means ranks fragments of the sequence of the present invention by varying degrees of homology to the target sequence or target motif. Such presentation provides a skilled artisan with a ranking of sequences which contain various amounts of the target sequence or target motif and identifies the degree of homology contained in the identified fragment.

A variety of comparing means can be used to compare a target sequence or target motif with the data storage means to identify sequence fragments sequence of the present invention. For example, implementing software which implement the BLAST and BLAZE algorithms (Altschul *et al.*, *J. Mol. Biol.* 215:403-410 (1990)) can be used to identify open frames within the nucleic acid molecules of the present invention. A skilled artisan can readily recognize that any one of the publicly available homology search programs can be used as the search means for the computer-based systems of the present

invention. Having now generally described the invention, the same will be more readily understood through reference to the following examples which are provided by way of illustration, and are not intended to be limiting of the present invention, unless specified.

5

Example 1

The cDNA library of the present invention designated LIB29, is prepared from *Triticum aestivum* spikelets. The wheat cultivar OSLO is used for collection. Seeds are planted at a depth of 0.5 inches in 1-inch diameter by 6-inch long conetainers (one seed per conetainer). The conetainers are filled with Metromix 200 potting soil, supplemented with slow release fertilizer. Conetainers are loaded in racks of 200 that occupy a 1.0 ft by 2.0 ft area. After seeding, the racks are placed in growth chambers with a 14/10 hour day/night cycle at 18 °C. These chambers are equipped with metal halide lamps which deliver ~350 uE/m²/sec. Humidity is maintained at 50%, and plants are watered twice daily. At Feekes stage greater than 10 but before anthesis, spikelets are harvested from plants and frozen in liquid nitrogen. Spikelet tissue consists of glume, lemma, palea, anthers, filaments, and gynoecium. The collected tissue is stored at -80°C until total RNA preparation.

For the construction of the cDNA library of the present invention, the SMART[™] PCR cDNA Library Construction Kit (Clontech Laboratories, Inc, Palo Alto CA) or a similar system, following the protocol and conditions suggested by the manufacturer, is used. Total RNA is isolated from the anther tissue using Trizol reagent (Gibco BRL, Life Technologies, Gaithersburg, MD). The cDNA is synthesized by first generating first strand cDNA from total RNA using the Superscript II enzyme (Gibco BRL, Life

Technologies, Gaithersburg, MD) and the SMART kit. The cDNA is then PCR amplified using the appropriate primers supplied in the SMART™ PCR cDNA Library Construction Kit, resulting in amplified double stranded cDNA. Adaptors from the SMART kit are ligated to the cDNA, followed by digestion with NotI and SalI. After size fractionation using SMART kits, the cDNA is ligated into the pSPORT 1 cloning vector. The ligated cDNA is introduced by transformation into Max Efficiency DHF-alpha Competent cells (Gibco BRL, Life Technologies, Gaithersburg, MD).

The quality of the cDNA libraries is determined by examining the cDNA insert size, and also by sequence analysis of a random selection an appropriate number of clones from the library.

Example 2

The cDNA library of the present invention designated LIB30, is prepared from *Triticum aestivum* glumes/lemmas and paleas. The wheat cultivar OSLO is used for collection. Seeds are planted at a depth of 0.5 inches in 1-inch diameter by 6-inch long conetainers (one seed per conetainer). The conetainers are filled with Metromix 200 potting soil, supplemented with slow release fertilizer. Conetainers are loaded in racks of 200 that occupy a 1.0 ft by 2.0 ft area. After seeding, the racks are placed in growth chambers with a 14/10 hour day/night cycle at 18 °C. These chambers are equipped with metal halide lamps which deliver ~350 uE/m2/sec. Humidity is maintained at 50%, and plants are watered twice daily. At Feekes stage greater than 10 but before anthesis, spikelets are removed from plants. The spikelets are dissected carefully to separate

glume/lemma and palea from other floral tissues. The glume/lemma and palea tissue is frozen in liquid nitrogen and stored at -80°C until total RNA preparation.

For the construction of the cDNA library of the present invention, the SMART™ PCR cDNA Library Construction Kit (Clontech Laboratories, Inc, Palo Alto CA) or a similar system, following the protocol and conditions suggested by the manufacturer, is used. Total RNA is isolated from the anther tissue using Trizol reagent (Gibco BRL, Life Technologies, Gaithersburg, MD). The cDNA is synthesized by first generating first strand cDNA from total RNA using the Superscript II enzyme (Gibco BRL, Life Technologies, Gaithersburg, MD) and the SMART kit. The cDNA is then PCR amplified using the appropriate primers supplied in the SMART™ PCR cDNA Library Construction Kit, resulting in amplified double stranded cDNA. Adaptors from the SMART kit are ligated to the cDNA, followed by digestion with NotI and SalI. After size fractionation using SMART kits, the cDNA is ligated into the pSPORT 1 cloning vector. The ligated cDNA is introduced by transformation into Max Efficiency DHF-alpha Competent cells (Gibco BRL, Life Technologies, Gaithersburg, MD).

The quality of the cDNA libraries is determined by examining the cDNA insert size, and also by sequence analysis of a random selection an appropriate number of clones from the library.

Example 3

The cDNA library of the present invention designated LIB31, is prepared from *Triticum aestivum* floral reproductive tissue (stamens, gynoecium). The wheat cultivar OSLO is used for collection. Seeds are planted at a depth of 0.5 inches in 1-inch diameter

by 6-inch long conetainers (one seed per conetainer). The conetainers are filled with Metromix 200 potting soil, supplemented with slow release fertilizer. Conetainers are loaded in racks of 200 that occupy a 1.0 ft by 2.0 ft area. After seeding, the racks are placed in growth chambers with a 14/10 hour day/night cycle at 18 °C. These chambers

5 are equipped with metal halide lamps which deliver ~350 uE/m²/sec. Humidity is maintained at 50%, and plants are watered twice daily. At Feekes stage 8 and 9, spikelets are removed from plants. The spikelets are dissected carefully to separate floral reproductive tissue (stamens, gynoecium) from other floral tissues. The floral reproductive tissue (stamens, gynoecium) is frozen in liquid nitrogen and stored at -80°C

10 until total RNA preparation. Glumes, lemma, and palea are not included in the RNA preparation and library construction.

For the construction of the cDNA library of the present invention, the SMART[™] PCR cDNA Library Construction Kit (Clontech Laboratories, Inc, Palo Alto CA) or a similar system, following the protocol and conditions suggested by the manufacturer, is

15 used. Total RNA is isolated from the anther tissue using Trizol reagent (Gibco BRL, Life Technologies, Gaithersburg, MD). The cDNA is synthesized by first generating first strand cDNA from total RNA using the Superscript II enzyme (Gibco BRL, Life Technologies, Gaithersburg, MD) and the SMART kit. The cDNA is then PCR amplified using the appropriate primers supplied in the SMART[™] PCR cDNA Library

20 Construction Kit, resulting in amplified double stranded cDNA. Adaptors from the SMART kit are ligated to the cDNA, followed by digestion with Not1 and Sal1. After size fractionation using SMART kits, the cDNA is ligated into the pSPORT 1 cloning

vector. The ligated cDNA is introduced by transformation into Max Efficiency DHF-alpha Competent cells (Gibco BRL, Life Technologies, Gaithersburg, MD).

The quality of the cDNA libraries is determined by examining the cDNA insert size, and also by sequence analysis of a random selection an appropriate number of clones
5 from the library.

Example 4

The cDNA library of the present invention designated LIB103, is prepared from *Triticum aestivum* 1-2 mm spikes. The wheat cultivar OSLO is used for the collection.

10 Seeds are planted at a depth of 0.5 inches in 1-inch diameter by 6-inch long conetainers (one seed per conetainer). The conetainers are filled with Metromix 200 potting soil, supplemented with slow release fertilizer. Conetainers are loaded in racks of 200 that occupy a 1.0 ft by 2.0 ft area. After seeding, the racks are placed in growth chambers with a 14/10 hour day/night cycle at 18 °C. These chambers are equipped with metal halide
15 lamps which deliver ~350 uE/m2/sec. Humidity is maintained at 50%, and plants are watered twice daily. At Feekes stage 4-5, 1-2 mm spikes are harvested from plants and frozen in liquid nitrogen and stored at -80°C until total RNA preparation.

For the construction of the cDNA library of the present invention, the SMART™ PCR cDNA Library Construction Kit (Clontech Laboratories, Inc, Palo Alto CA) or a
20 similar system, following the protocol and conditions suggested by the manufacturer, is used. Total RNA is isolated from the anther tissue using Trizol reagent (Gibco BRL, Life Technologies, Gaithersburg, MD). The cDNA is synthesized by first generating first strand cDNA from total RNA using the Superscript II enzyme (Gibco BRL, Life

Technologies, Gaithersburg, MD) and the SMART kit. The cDNA is then PCR amplified using the appropriate primers supplied in the SMART™ PCR cDNA Library Construction Kit, resulting in amplified double stranded cDNA. Adaptors from the SMART kit are ligated to the cDNA, followed by digestion with Not1 and Sal1. After size fractionation using SMART kits, the cDNA is ligated into the pSPORT 1 cloning vector. The ligated cDNA is introduced by transformation into Max Efficiency DHF-alpha Competent cells (Gibco BRL, Life Technologies, Gaithersburg, MD).

The quality of the cDNA libraries is determined by examining the cDNA insert size, and also by sequence analysis of a random selection an appropriate number of clones from the library.

Example 5

The cDNA library of the present invention designated LIB104, is prepared from *Triticum aestivum* anthers. The wheat cultivar OSLO is used for the collection. Seeds are planted at a depth of 0.5 inches in 1-inch diameter by 6-inch long conetainers (one seed per conetainer). The conetainers are filled with Metromix 200 potting soil, supplemented with slow release fertilizer. The conetainers are loaded in racks of 200 that occupy a 1.0 ft by 2.0 ft area. After seeding, the racks are placed in growth chambers with a 14/10 hour day/night cycle at 18 °C. These chambers are equipped with metal halide lamps which deliver ~350 uE/m2/sec. Humidity is maintained at 50%, and plants are watered twice daily. At Feekes stage greater than 10 but before anthesis, spikelets are removed from plants. The spikelets are dissected carefully to separate anthers from other floral tissues.

The anther tissue is frozen in liquid nitrogen and stored at -80°C until total RNA preparation.

For the construction of the cDNA library of the present invention, the SMART™ PCR cDNA Library Construction Kit (Clontech Laboratories, Inc, Palo Alto CA) or a similar system, following the protocol and conditions suggested by the manufacturer, is used. Total RNA is isolated from the anther tissue using Trizol reagent (Gibco BRL, Life Technologies, Gaithersburg, MD). The cDNA is synthesized by first generating first strand cDNA from total RNA using the Superscript II enzyme (Gibco BRL, Life Technologies, Gaithersburg, MD) and the SMART kit. The cDNA is then PCR amplified using the appropriate primers supplied in the SMART™ PCR cDNA Library Construction Kit, resulting in amplified double stranded cDNA. Adaptors from the SMART kit are ligated to the cDNA, followed by digestion with NotI and SalI. After size fractionation using SMART kits, the cDNA is ligated into the pSPORT 1 cloning vector. The ligated cDNA is introduced by transformation into Max Efficiency DHF-alpha Competent cells (Gibco BRL, Life Technologies, Gaithersburg, MD).

The quality of the cDNA libraries is determined by examining the cDNA insert size, and also by sequence analysis of a random selection an appropriate number of clones from the library.

Example 6

The cDNA libraries are plated on LB agar containing the appropriate antibiotics for selection and incubated at 37° for a sufficient time to allow the growth of individual colonies. Single colonies are individually placed in each well of a 96-well microtiter plates containing LB liquid including the selective antibiotics. The plates are incubated

overnight at approximately 37°C with gentle shaking to promote growth of the cultures.

The plasmid DNA is isolated from each clone using Qiaprep plasmid isolation kits, using the conditions recommended by the manufacturer (Qiagen Inc., Santa Clara, California U.S.A.).

- 5 The template plasmid DNA clones are used for subsequent sequencing. For sequencing the cDNA libraries LIB29, LIB30, LIB31, LIB103 and LIB104, a commercially available sequencing kit, such as the ABI PRISM dRhodamine Terminator Cycle Sequencing Ready Reaction Kit with AmpliTaq® DNA Polymerase, FS, is used under the conditions recommended by the manufacturer (PE Applied Biosystems, Foster
10 City, CA). The ESTs of the present invention are generated by sequencing initiated from the 5' end of each cDNA clone.

A number of sequencing techniques are known in the art, including fluorescence-based sequencing methodologies. These methods have the detection, automation and instrumentation capability necessary for the analysis of large volumes of sequence data.

- 15 Currently, the 377 DNA Sequencer (Perkin-Elmer Corp., Applied Biosystems Div., Foster City, CA) allows the most rapid electrophoresis and data collection. With these types of automated systems, fluorescent dye-labeled sequence reaction products are detected and data entered directly into the computer, producing a chromatogram that is subsequently viewed, stored, and analyzed using the corresponding software programs.
20 These methods are known to those of skill in the art and have been described and reviewed (Birren *et al.*, *Genome Analysis: Analyzing DNA*, 1, Cold Spring Harbor, New York, the entirety of which is herein incorporated by reference).

We claim:

1. A substantially purified nucleic acid molecule that encodes a plant protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 11840.

5 2. The substantially purified nucleic acid molecule according to claim 1, wherein said plant protein or fragment thereof is a wheat protein or fragment thereof.

3. A substantially purified wheat protein or fragment thereof, wherein said wheat protein is encoded by a nucleic acid molecule that comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 11840.

10 4. A transformed plant having a nucleic acid molecule which comprises:

- (a) an exogenous promoter region which functions in a plant cell to cause the production of a mRNA molecule;
- (b) a structural nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 11840 or complements thereof;
- (c) a 3' non-translated sequence that functions in said plant cell to cause termination of transcription and addition of polyadenylated ribonucleotides to a 3' end of said mRNA molecule.

15 5. The transformed plant according to claim 3, wherein said structural nucleic acid molecule is a complement of any of the nucleic acid sequences of SEQ ID NO: 1 through SEQ ID NO: 11840.

6. The transformed plant according to claim 4, wherein said plant is wheat, soybean, cotton or maize.

7. The transformed plant according to claim 4, wherein said plant is maize.

8. The transformed plant according to claim 4, wherein said plant is soybean.
9. The transformed plant according to claim 4, wherein said plant is wheat.
10. The transformed plant according to claim 4, wherein said plant is cotton.

Abstract

Expressed Sequence Tags (ESTs) isolated from wheat are disclosed. The ESTs provide a unique molecular tool for the targeting and isolation of novel genes for plant protection and improvement. The disclosed ESTs have utility in the development of new strategies for understanding critical plant developmental and metabolic pathways. The disclosed ESTs have particular utility in isolating genes and promoters, identifying and mapping the genes involved in developmental and metabolic pathways, and determining gene function. Sequence homology analyses using the ESTs provided in the present invention, will result in more efficient gene screening for desirable agronomic traits. An expanding database of these select pieces of the plant genomics puzzle will quickly expand the knowledge necessary for subsequent functional validation, a key limitation in current plant biotechnology efforts.

Combined Declaration and Power of Attorney for Patent Application

Docket Number: 38-21(15726)B

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter that is claimed and for which a patent is sought on the invention entitled Nucleic Acid Molecules and Other Molecules Associated With Plants, the specification of which is filed herewith unless the following box is checked:

☐ was filed on ;
as United States Application Number ; and
was amended on (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information that is material to patentability as defined in 37 C.F.R. § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application, which designated at least one country other than the United States listed below, and have also identified below any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Claimed

☐ Yes ☐ No

 (Application No.) (Country) (Day/Month/Year Filed)

☐ Yes ☐ No

 (Application No.) (Country) (Day/Month/Year Filed)

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I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor	Timothy W. Conner
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Citizenship	USA
Post Office Address	

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(Application No.)

(Country)

(Day/Month/Year Filed)

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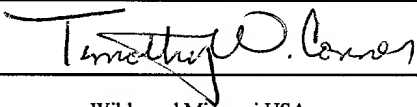
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Inventor's signature		Date
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Full name of third inventor		
Inventor's signature		Date
Residence	USA	
Citizenship	USA	
Post Office Address		

<110> Conner, Timothy W.
Masucci, James D.

<120> Nucleic acid molecules and other molecules associated with plants

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<223> Clone ID: LIB103-001-Q1-E1-B6

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actcacctaa cttgttctgt cctacagtca atcttgaatc aatgcccac cgggtcgacc 240
gtccaagggg atccaagcct atctaagcct gcatccaata tcaaattgtc accaatgagt 300
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<210> 11
<211> 460
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-B7

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tcatagcaga gtggacgcca acaccagatg aagaaattcc agagacgagc atccccgtca 180
aagaggcaag caaagagtgg ctgatgtact ttgatgggtgc cttctcgctg caaggcgccg 240
gtgcgggcgt gctgcttgtc ggcgccaccg gagagcacct caagtacgta gtccagatgc 300
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tcgtctgccca agtgaacaag aactaccaga gtccattgat 460

<210> 12
<211> 413
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-B8

<400> 12

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caagatcaat gccgcgaaaa aggggcatta ccataagctg gggctaagtg tctaagttgt 180
ggccccgggt aagttggata aaggtgaaca acagatgggt tatgcaaggc tcattccaat 240
tacattgagc tgggcccccg ggtccaagac ttgggtccaa atgcattgga agatattggg 300
cccaaagaca aggcaagttt tggagaaagg gaagtcctaa aggaaccac ctcaaaatac 360
ttgttgcaat ataagaagct cgaacggggg gtgttcacgc ccaacagaga gaa 413

<210> 13
<211> 459
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-C10

<400> 13

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ctcaaccggc cgtgacgctg gtgtacacgt gtgctggtct gtgttggtg ctggcctgct 180

gggtgtgcgc gagtgcgtcc ttctgtgcat gccgccgct agtgggtgaat tgtgcgcgag 240
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 gtgctacccc gagtgggttc aactttgttt acttcaccgc atgtcaaagtg ggcctctagt 360
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 acaaggcagc atgtggactg tgagcgtata aacaatata 459

<210> 14
 <211> 248
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-C5

<400> 14

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 cgaactcata cgattttccg ctgaaaaaaa tagcggaaag catcacccgc atggccagca 180
 tcattgccaa aatgaaggag aagctccgga taggtggcag cagcgaagaa ttcaagaagg 240
 aacacgag 248

<210> 15
 <211> 382
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-C6

<400> 15

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 cggttgctgc ccacgcgtca gtcacgcccc caaaaaccct ttttccaaaa ggaaggggaat 180
 gactgcaatt gggcaaccaa atttttgggc ctgccattgg cctgcaaggt aattcaggtg 240
 ggtttccccc ccggcccaat tccggttttc cgtttaattt tccaatttgg tttccaaggt 300
 cccaatttag tttaggcact aaccattttt tataaatgtt gaaaattatt gtggatgcta 360
 ccgatttat tccgggaacc cc 382

<210> 16
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-C8

<400> 16

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 tgaaggagga agtaaagtgc atcaaagcca ttatagagag gctgatacag agggaaggcc 180
 atcttgtagt catagacgaa ggaacagcgg cagcagaagg tgctgcagca agggcatcgg 240
 agcacagaat cctggctggt aaccggaact acgtcattga ttgattaacc agctgaagac 300
 acagctaact aaattcaaca aatgttggtg accaatagaa caagaaattc aaccggaaaa 360
 aacctggtgt caaaagcccc aaaaattgta agttgttact tccaaccccc ttccaaagg 419

<210> 17
 <211> 437
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-C9

<400> 17

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 cagtgccgag tactgaagca tttgattttg atgatgccgg tgttctttca atcaagtagg 180
 cacgtgtagt gtttgccggt actcgaagag cacagaggct gtagtctgta aattatactt 240
 tgtaacagtt ttctaataca ttcttcagta tcccaggctt ccttttttcg ctggagagac 300
 aggatgagat tttatttggt aggatttcag aataaggtcc taatacatct gtttctttgc 360
 tcaacgcgct atcttcaca gtcagaggat ggatgtaacg ttagttcatc ataatgttat 420
 ccttctgcaa aataaaa 437

<210> 18
 <211> 382

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-001-Q1-E1-D4

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 gcattgcttt gagttgaaca tgcattgaga tgctgtgcag actcatgacc ttgcaggaac 180
 tgcacgaaca gtcgccgact gcatgtattc accaatgaga agactggagt tttccgatgg 240
 tgtgtctgtt gaaggctcga ggatgtcaac cgcaacgcct cgttcagaaa aaggcaaggt 300
 gaagccaggc agcagcaaag cacagctgca tacttcggca ccaggaatca gctcccgcaa 360
 cggtgacagg atcgatccta ta 382

<210> 19
 <211> 379
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-001-Q1-E1-D5

 <400> 19

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 ttagttgaac atgcatggaa gatgctgtgc agacggacga ccttgacggg acaccactaa 180
 tagtcgtcga ctgcatgtca tcacccttca gaagagtga cttttcccaa ggcagtggtc 240
 cgtcaatgta cgaggatctc aatgggaaag ccccggttcta taacaagtta agtgaattga 300
 agcagaacct cctttcagct gcagacttcg gcacaaaaaa gcccctcccg ctactgttac 360
 ccgatagatg cgcaacatg 379

<210> 20
 <211> 408
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-001-Q1-E1-D6

 <400> 20

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gggggaggag ggctatatat agtgtgagcc caaatgtggc cgttgtaatg caagtacggg 180
caggccggac atccgggcaa ggggcccggac atccggcttg gcaaggcact aaaataccag 240
acctaaacca gaggaaaaaa cagagggggc ggacatccgg ggccaagccc agacatccgg 300
catatcagga aagcccagac atccggcaca tggccggaca tccggcaagt tcaccaaadc 360
gaatagccct ctagatagca caagcccggac gtccgacaag ggagccca 408

<210> 21
<211> 463
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E1-D7
<400> 21

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tccacatacg gccccgaacg atgtgtatag ggtttcgaga caccaaaccg gcgcccgcaca 180
tacctggcca cgtacctacc gcatcacagc ccacccaag ggtcagcgct gtgcacggcc 240
tccattatac taaaaacacc ttgcaactcc tggacagagg acaagggtgg ttaataagtc 300
gagcgggggtc atatttcaag gcccaatgca tggtagtagc tgattcttaa tcacacatac 360
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tctcatcgat acctttacca aatcatgttc aacacttaac tcc 463

<210> 22
<211> 154
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E1-D8
<400> 22

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ctcgggcagt gttgccatag gcgacacgca gagccgcac tgtcagatgg gagagcgcca 120

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acggcctttg gacgatgtca ggaacggggg acct 154

<210> 23
<211> 479
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-E1

<400> 23

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ggccagttct tactcaagag gtcaacaatc ccaactatac atatagtcca actcaaaagg 120
ttgtagaacc taattttgta gttggggccc cgtcgtccac taggttatct gaagctggtg 180
gtcagttaaa ttgtgttgtt ttaccagatt ctcaggctaa gaatgggcgt tttgtaaaga 240
tgctggattc aatctcggtt cccctgctt ttgcagcaga gttcccaggc aaatccttgt 300
ctggtgtgca ccctaacacc atcagcgtgt ctaccgaagt aatcagcata ggaagcttaa 360
ctgttgcttc tcgacaaggc aagtggctgt tccagaagga tgaagacatg gagcttctct 420
tctccacagg tttccagcct gataaccgca tacactgtgg tggctgcaac acagtgact 479

<210> 24
<211> 398
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
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<400> 24

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caccgcgtccc cctgtcctca cctccacagg agattaagcc tacgcacgcg ttgagagctt 120
ccaatctgct accatggata acgttccaca taccaatacg acctactgca acaacataga 180
tgtgcaagaa gcacaccctc cacagcgtta cacaatacag ggcccgaac gatagtcttt 240
ctgctcacgg caatcgctgt tatgaccgca atcagtcagg atatcgtggc cagaccaagc 300
ctgttttcca caagaatgcc acgacaacat ataatttgt actgaatctg cagtgccaga 360
gcttcacgca ttactcgcaa cgcgccatca tgaggtgc 398

<210> 25
 <211> 456
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-001-Q1-E1-E11

 <400> 25

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 cacgatgtcc aagacaagca tgaccacaaa gtagtcttat aataaaacac taccgagttc 180
 aggaggggga accatcaacg aggggtatcga agtccttaca taagtccgga ttagctctta 240
 tgaagaaact ccttctcctt gaacaaatca atcagtggct tgggtgtgcta gggatacata 300
 tagattgaag gttgcaagtc ttcaaaccac agcattcttc gcacgtgtgc atgactgatt 360
 tggaatgatt ccaaagaaag caacattgac tttctcgaat ccatggcggc aacttgcac 420
 agatgcacat gaattaaagg aagtcactaa cttcat 456

<210> 26
 <211> 440
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-001-Q1-E1-E5

 <400> 26

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 ttctatgacg ataattgtga caaaaccgg tagcatcata gatgtggtag gctcctactt 180
 ctatgacaaa aaatcatgac agaaaatggg cttttcatcc tgggcgggct ggagacgcag 240
 ctgcatgaca ttctttgggc cgtccatgat ggaaaaaccg tggtagaagc gagggggagg 300
 aaaatttcgg gaagtttccg gttacggtgg gaggtccgag gccgagcgat gcgcgtttct 360
 ctcgtacacg tacgcgcgtg tgtccgaggc gttggctcga actgaaccgg agcgaggcgt 420
 tgggctctaa ctgaaccgga 440

<210> 27
 <211> 460
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-E6

<400> 27

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 cttgtctcat tgggctccct aaatttaaag atttttacaa gctcaacggg aagcctgtct 360
 atgtactggg ggagtctctg gaatatgaaa aataagaaac cggtgaccag ggacgcacca 420
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<210> 28
 <211> 449
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-E7

<400> 28

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 tcgggtgcct gtggcatgat ggagagccgc cgctgaaagc tcagtgatgg ggagagttgg 180
 ttgaggcgtc aatggcacct ttgctcgtga ccgaggatgg cacttgacac gctgaagtaa 240
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 caacaacaag gtcttcgaag ggttagggct tagggcaact cgatggtagc cagtcggagt 360
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 ctgctcatct tgattgattc ctctacagt 449

<210> 29
 <211> 441

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-001-Q1-E1-E8

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 aagtccttat tcaggttttc attgctgtgtg gtactgggaa aggaaaaggc acaccggatg 300
 atctgtttcg caaaccaaat tcaggaatgt ggtggttgat ggcagagcat ttcaattctg 360
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 <211> 416
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
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 <400> 30

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 cttagaagga gcttgcttgc agcctggctg ttctatgtcg tatgctacct ttagaactag 360
 agtaaaatgt aagaagtga agaacttgtg aggctatggg tctgtgccat aacctg 416

<210> 31
 <211> 444
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-F5

<400> 31

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ttttgccaac acaatgaatt atgagggcga tatgcaaata tcgaccatgc gttcttatct 180
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ggctgaggat aaattccata gcgttgattt tgatggtacg atcgaagaat atggatgaga 300
cgctcttgg agtctcctat atgaaaattg tcgtccttgc ctacgggctt tacacttgta 360
ctcccttaat tccactagct tcgcaatagg agatgtgatg ccgctcaatg actcgaggat 420
ttcccttaag aacccaagcc atgt 444

<210> 32

<211> 440

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-F6

<400> 32

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gaggagatga agaaggtgga gtcgaagaac gccctggaga actaatcgta caacatgcgc 180
aacaccatca aggatgagaa gatcacctcc aagctgccgg cggacgacaa caagaagatc 240
gaggacgcca ttgacactgc catccaatga ctggacacaa accagctcgc tgatgcggat 300
gacttcgaag acaagatgaa cgagcttgac gctctgtgca accccatcat cgccaggatc 360
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cggcgggtgct gggccaaga 440

<210> 33

<211> 461

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-F7

<400> 33

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acctttggga agacttgggt gaagtcttta taatcttgct gtaaaaaaca gaaacttttg 180
cgctcacgag attagcggcc attttttact ggagagtgat tttagggtga ttagtttttc 240
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ccttggtgtg tttgcttatt ttgatgaatc tatgagtagt atcgcagggt atgaaccata 420
gataagttgg aatacagtag atattacact aatatgaatt t 461

<210> 34

<211> 374

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-F8

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tgcagatgca gctgaaaaca atgacaacaa tgatgcacaa gagttgcaat atccttcagc 240
ctagtggacc tactgggttg acctgatgag aacataagat gcaaattggca agacccaaat 300
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aagggttac caat 374

<210> 35

<211> 374

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-G11

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 ggatcatatca ccggtctact gtcagtcagt ccgccgtggg aacttgcgga tgtttgctgc 180
 aataagacag acgcaggtga ttctgagtc aactaggatt agttgtatga cggtagcgaa 240
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 aaagtgtgtt tgta 374

<210> 36
 <211> 483
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E1-G4

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 ggcattgctg atgagctcaa gaagaccctg gtcaggagga gcattcaggt aagaacagag 180
 caacacaaat tgtcatgttt ctaagggaaa tagagcatgc tttgtgatat gaacaatggc 240
 tgattttatg ttttgtaaac ctaaactttc caacaaactt gcgagaaatt tatattcaga 300
 tggcacatgg aaatttatat tcagatgata tggctacttc atattaggga gatattttcg 360
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 tca 483

<210> 37
 <211> 368
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E1-G6

<400> 37
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atcatcatca tgacatgcgt tacttttgtc atattgccat tgcattgatca ttagtttgac 180
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caccatcccc gtacaccgcc ggaggcattc atatagagtc acatcttggt ctagtttcga 300
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ccagaaag 368

<210> 38
<211> 191
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-G7

<400> 38

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acatgaagct cagggatgac cttgagaggc tcaagaagat caggaaccat cgtggtctgc 120
gtcactactg ggggtgtgcgt gtcggcgggg agcacaccag gactaccggc aggacaggaa 180
agactgttgg t 191

<210> 39
<211> 405
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-G8

<400> 39

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gggatgacct tgagagggtc aagaagatca ggaaccatcg tggctcgcgt cactactggg 120
gtgtgcgtgt ccgcggtcag cacaccaaga ctaccggcag gagaggaaag actggttggtg 180
tctccaagaa gcgataagct gcttcacaaa gattcctcat agctttgcta ctactgtgtt 240
gggccatttc cagaatctta agggagtgtt cttatttaga tgattacctt ggatgatgtt 300
ttgccctaga taatgttttg gttctggaac ctttaataata ttgtatcttg aattccttgt 360
tgaactcgta caagagtttg ttttgccatg tgcttcagat gaaaa 405

<210> 40

<211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-H5

<400> 40

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 aatatctggt gcagccgctt ggccgtgctg aagacgaaga gcattccagt gacttcgagc 120
 cagaagaaaa tggatgatggt gctgaggacg aggagattga ggatgacgat gctgaggatg 180
 gtgaggatcc tgtcaaggcg caatccccat caaagaggaa gaggtctggt ggggaggatg 240
 aagatgatga cgacggtgat gatgatggtg atgatgatga gaagcctcca tcaaagcgat 300
 agtcaatttg ttcgtgctga tctgtgatct tctctgcttg ggccaagaag gaaaataatc 360
 ctcatggaga ggattgttgg taaatgctgt agctttagga catctgtggt aggtgtagca 420
 gctcaaac 428

<210> 41
 <211> 460
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-H6

<400> 41

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 cccctgtttt gcttggagca ttattttatt ttgctagttt ttgcttgctg tcagtttagca 180
 taatgttttg catcttttagt ttcaataaaa aaagtcaagg atagcctttg ccatgcttaa 240
 tttgctagtt tgcattgttg tgtttgaaaa cagaaagttc accgttggtg caaaaattcc 300
 ctagaaaagt catagaatgg tataacgttg aatctttttg catattaagc tctgataaat 360
 ttattacagt aggaatttta gttcataatt tgtggattca gggaagtatt tttactcctg 420
 cattctttac atactgtact gttttcgcag attgctgta 460

<210> 42
 <211> 337
 <212> DNA

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gccgaatgaa aagttccagt agttcactct ataatcctag tattgggttac atgcacacac 120
atctcagtgt aatccaacaa tatctacaca gggctctgtt tttgtgctag tgacaagttg 180
agttagttgc aatgggtctag ctgctaaaca agcagacctg agttcgacga tgtaccgatc 240
aatcctttga tcccagagaat agttttttta gtgggtgatc ccgatcacga gaaaagtgaa 300
tcgagaaaac tgatcgcaat tgatgatgag aaaatcgaaa accggtaggg cctaaaaacc 360
aaggattgac atacaagaaa ggaaaatgct tgtggctggc agggcagccg aactttaagc 420
tggtcatgca 430

<210> 45
<211> 388
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A11

<400> 45

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ttgcgcagtt cgtgagcgg aatccggacg tgctgttctt gcaagtcaac tacgagaagc 120
acaagtccat gtgctacagc ctccatgtcc atgtcctccc tttcttcagg ttctacaggg 180
gagcccaggg cagggtcagc agcttcagct gcacaaatgc aaccatcaag aagttcaagg 240
acgcctctgc aaagcactcg ccggacaggt gcagcctcgg cccggcgcgg gggctcgagg 300
agggcgagct cttggctctg gcggcaaaca gggacctgga attcacctac aacgagaagc 360
cgacgctggt gccgatcgcc gaggctat 388

<210> 46
<211> 146
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A4

<400> 46

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cgacgcgtgc ggcgggggcg gcggcgccgc tgtgtgggag catgaggacg gcgttcggta 120

cgggatggag taggatggta tgcgag

146

<210> 47
<211> 461
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A5

<400> 47

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acccaagctc agtttaatga ggaaattcaa gatgatcaag cagaagctgc tctagtaaaa 120
aaattgctcg aagagagtgg caatgacacg aagaggaaga aacaacctgt ggatacgacg 180
aatcaggggtg ccaataaaac aaagcagttt aaggcattga cgccaaagga gagcacgcca 240
agaggagcga aagaggttga cagttctttt actgaaggtg gcttatcctc caaactgaaa 300
accaagctga cggttgatgc aaatgatatc attctggtta aaaagaaaaa tgttcaagga 360
aaggatggtt tacaggagaa gaggcagga gcaagggggg acagtcctgt gtgtggagct 420
tgtggtcagc ttggacatat gcggaccaac aaacggtgcc c 461

<210> 48
<211> 459
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A6

<400> 48

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tctgtgaggg ctttttagca aaattacaaa tgaactgagt ctgcgacatg ttttttggga 120
cggagggagt atttcggtag ggatggagta gatggtatgc tagctcaaaa aagaaaaaga 180
gtagatggta tgcaaacagc caaactaagt gcaaccaggc tcgctgggaa aggctaccaa 240
acacggccct agggggccacg tgcagccact caatccactt gcttgttttc actcttgtgt 300
tttggtgggc actcgtgcgg acgaagcatg gaagctcgcg acatgacctg ggctcgcacc 360
caacatcaga cctctcgcgc ccgcacgcac gcccgaagac atggctggag gtggtgcccg 420
caccgcacgc cccgacagct tcatccgaca cgcggaac 459

<210> 49
 <211> 463
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A7

<400> 49

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gagagttgat atcagtttta gaccaaagga aggatgaatc aattgaacgc acatttaaag 120
gagttgcaag gcacttccgc gaagtgttct ctgaattagt gcaaggtggt cacggatacc 180
tggttatgat gaagaaaaag gatggtgatg ctgccgatga tgacatggat gaggacgcgc 240
ctcgtgaagc agatcctgaa gggaggatag agaagtatat tgggtgtgaaa gtcaagggttt 300
ccttcactgg caagggagaa actcagtcca tgaagcagtt gtctggaggg cagaagacag 360
tgggtggcatt aacctgatc ttcgctatcc aacgatgtga cccagctccg ttctacctgt 420
ttgatgagat tgatgctgct ctggattctc agtacagaac ggc 463
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<210> 50
 <211> 457
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A8

<400> 50

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gagagttgat atcagtttta gaccaaagga aggatgaatc aattgaacgc acatttaaag 120
gagttgcaag gcacttccgc gaagtgttct ctgaattagt gcaaggtggt cacggatacc 180
tggttatgat gaagaaaaag gatggtgatg ctgccgatga tgacatggat gaggacgcgc 240
ctcgtgaagc agatcctgaa gggaggatag agaagtatat tgggtgtgaaa gtcaagggttt 300
ccttcactgg caagggagaa actcagtcca tgaagcagtt gtctggaggg cagaagacag 360
tgggtggcatt aacctgatc ttcgctatcc aacgatgtga cccagctccg ttctacctgt 420
ttgatgagat tgatgctgct ctggattctc agtacag 457
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<210> 51

<211> 422
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B10

<400> 51

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 ggagattcgg gcgatggaga agacgacgag gggggcggcg gcgccgaaga catggacgac 120
 gacgacgatt gatcgtagcg gcctcatagc accccttacc agttaccta aacaagggtg 180
 ggcgtccttt tgaccccaaca gcattagctt tcttgtagat aggcactctc cagtccagga 240
 tagttgagtg gtggtgatag tgggtgttgg gttaaattgtt gctgggggta aaatgcattc 300
 atctgatact atggtttata tccctgtttt tggccaaaga aagaaagaag acgacgatga 360
 gatcgagcgg tttcgcgcgc ttttcgaaac gcgcccggcc ggtctcgttc gattcgcattg 420
 ac 422

<210> 52
 <211> 441
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B11

<400> 52

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 aacttaagcg tgaggcccgg atgaagggtg ggttctatgt cagtcctgag gcaaagctgc 120
 tgtttgtcgt ccgatccgt ggtatcaatg caatgcaccc aaagaccaag aagatcttgc 180
 agcttttgcg tttgaggcag atttttaatg gtgtgttcct taaggtaaac aaggccacca 240
 ttaacatgct gcgtcgggtt gagccatatg ttgcctacgg gtaccctaac ctcaagagtgc 300
 tcaggagct gatctacaag agaggttacg gaaagctcaa caagcaaagg atccctctgg 360
 ccaacaacaa agtcacgag gagggtttgg ggaagcaca catcatctgc attgaggacc 420
 ttgtgcacga gatcttgacc g 441

<210> 53
 <211> 457
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B2

<400> 53

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 tccgagatcg cgcgactcgt cccgctcacc gccacaaca accactcccg caacaaatcc 120
 gtcgtctcca aggtggacta ctacctgcgc ctcttcgggt ccttggagga attcctccgg 180
 gcattcaagc ataaccacaa tctcctctca cacaacctcg agacggtggt caagcggaat 240
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 atgccaagga tgctcacgc caacgtggaa caaatccggg ggatggtggc cgggtgctgag 360
 cgtctaggtg tgcctcgcgg ctctgggatg ttccggcaag ccatgcggag tgttgcgttc 420
 gacagcgagg acaagatcgc cgccaaaatg gaataca 457

<210> 54

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B3

<400> 54

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 tgccgcgctc tccaccccaa gattgcgcag ttcgctgagc ggaatccgga cgtgctgttc 120
 ctgcaagtca actacgagaa gcacaagtcc atgtgctaca gcctccatgt ccatgtcctc 180
 cctttcttca ggttctacag gggagctcag ggcagggtca gcagcttcag ctgcaccaat 240
 gcaaccatca agaagttcaa ggacgccctc gcaaagcact cgccggacag gtgcagcctc 300
 ggcccggcac gggggctcga ggaggcggag ctcttggtc tggtgcaaa cagggacctg 360
 aaattcacct acaacgaaaa gccgacgctg gtgccgatcg ccga 404

<210> 55

<211> 453

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B5

<400> 55

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tgtctgcaaa tgttcagtgg tggtagatat ggtaaagtgt aagttatgaa agacaccact 120

gttggcataa aatcctatgc aggtattgct gcggagggtta tcggaaacgg agcgctcttg 180

atggcaatga attaccatgt caatacatcc aatagcgctt tgtgggatta catgccaatg 240

gttttccaca tctgaccttc tccgaaattt ttgcaccgta cttccgccat gttaggccgc 300

gtttcatctt ttgcttggtta tgatagtatt tcaacccttt ttgtgggaaa agctgatatt 360

ggtttagatgt tgggtataga agagccatag agggaaccta acaacgacat tttcggcagc 420

acggtccatt ctttgcataat tgccctgccg ttt 453

<210> 56

<211> 348

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B6

<400> 56

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atacatgtag ccgtggcgat cgcagttttg cgaaacgtgc tgttggagta gtgaaatctg 120

tccgtcgctt gccattgttg cctgtgcgaa gcatcatgct attatgaaca ttcgtaggat 180

gtacgtatct cactaagcat gttctgtact actgtcactc ttgaattcat tgcccatcac 240

ggtcggccgt ccaaggcgat caaagctaata ctaaccttgt acgagatatc agatcgcacc 300

attgagtcgt caatattcag atctgtgacg atcatcttac atagtcca 348

<210> 57

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B7

<400> 57

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aagctttggc ctcaagtttg agagaacttc aactatccaa agcagagcat tggcagaatt 120

catagcagag tggacgccaa caccagatga agaaattcca gagacgagca tccccgtcaa 180
agaggcaagc aaagagtggc tgatgtactt tgatgggtgcc ttctcgctgc aaggcgccgg 240
tgcgggctg ctgcttctgc cgcccaccgg agagcacctc aagtacgtag tccagatgca 300
ctttcccaag gagcaagcaa ccaacaatac tgcagagtat gaaggattgc ttgccggtct 360
cagaatcgca gcagaccttg ggatcaagaa gctcattgtc aggggtgact cacagcttgt 420
cgtctgccaa gtgaacaaga actacc 446

<210> 58
<211> 458
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-001-Q1-E2-B8

<400> 58

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cgctttcatg aaattcaagg aatcggaatt agctcaggaa cggtcgagaa taaacaagat 120
caatgccgcy aaaaaggagc attaccataa gctggggcta ggtgtctacg tgggtggccc 180
gcctaagtgg gataaggctg agcaacagat ggtgtatgca ggggtcattc cagttacatt 240
gagctggccc cccgggtcca agacttgggt ctatatgcat gggaggatat tggacceaaa 300
gacaggccag gttttggaga aaggcaagtc ctaaaggagc ccacctcaaa atacttggtg 360
caatagaaga ggctcgaacg gnggtgttca cgccaacag agagaacgac gagcttatgg 420
gcgccctgng aaatcatgaa caccgggga agaacacg 458

<210> 59
<211> 410
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B9

<400> 59

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agatacgtcg ggtttatcca aggcattggtg ggggaaggct ataatgacat ccggtcatgt 180

cctgaataaa gttccaacaa aggataacga gatcactcct tatgagaagt ggacgaagag 240
aaggacaaca ctctcgtaact tacgtacctg gggatgcttg gcgaaagtta atgtgctgat 300
ccccaaaaag cgtaagcttg gaccaaagac tgtggactgt gttaatttgg gctatgctat 360
gaatagtgtg ggctatagat ttctagtagt gaaatctgaa gtacctgaca 410

<210> 60
<211> 450
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-C10

<400> 60

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ccggatgcgg ttttggctcg agccgcctcc gcttgttggc tgccctaccg tccatctcaa 120
ccggccgtga cgctggtgta cacgtgtgct ggtctgtgtt gtgtgctggc ctgctgggtg 180
tgcgcgagtg cgtccttctg tgcatgccgc cgcgtagtgg tgaattgtgc gcgagtgcgt 240
ccttcacgcg gaagaagtgt gtcctcaatg caccctcagt ttactagcgt gcgggggtgct 300
accccgagtg gtttcaactt tgtttacttc accgcatgtc aaatgggcct ctagtttact 360
tattttttcac ccaactccac atggggccagc acacgaagat agagaacacg agctgacaag 420
gcagcatgtg gactgtgagc gtataaacia 450

<210> 61
<211> 412
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-C11

<400> 61

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aaaggcacat ccagatgtct tcaacatgat gcttcagatc ttagaagatg ggaggctgac 120
agatagcaag ggacggacag ttgacttcaa gaacactctg ctgatcatga catogaatgt 180
cggaagcagt gtcacgaga agggaggccg gaagattggg tttgacctg actctgacga 240
gaaagatacc agctataaca ggatcaagag cttggtgacc gaggagttga agcagtattt 300

ccggccagag ttcttgaaca gattggatga gatgattgtg ttccggcagc tgacaaagct 360
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<210> 62
<211> 437
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-001-Q1-E2-C2

<400> 62

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ggtggctccc tgcagcgatg tcggctcgta gcatccggcg tgatgcatca caacagcagg 180
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acgccttcgt gctgtgttgc agcactgatg ggttggtggt ccacctatgg cctcnctctt 360
cttgctccgt tgcagtgttg acgttgagcg gcggtcttct cgggcctcct cttcttgctg 420
cgttgccgtg ctgacgt 437

<210> 63
<211> 451
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-C4

<400> 63

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caggaacagg aagcaagctg cccccccccc tcctcatctc cgactcactc acgatccgag 120
atcaggatgg ccggatcgat ggaactccct accaaggggc gcttcagctt cgacctgtgc 180
cgcaggaacg ccatgctgga gaagaatggc ctcaagatgc ccgggttcag gaagaccggg 240
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accgagggtc ctatagttgc tgataagaac tgcgagaaaa ttcattttat ggcaccaaac 360

atatattgct gtggtgctgg aactgctgct gacacagagg ctgtgacaga tatggtcagc 420
tcccagctac aacttcaccg ttatgctact a 451

<210> 64
<211> 299
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-C5

<400> 64

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acaagaagaa ggaggagcac aaaaagcggc gacgcgaatt gaccgacaga cggggagcat 120
cgcatcgaat gagcactcaa cgatgtccct cggaaagaaa taaccggaag catcaccgcc 180
atggccggcg tcatgcgcag aatgaaggag acggtccaga taggtggcag cagcgacgag 240
tccaagacgg acaaggagca caggacaggg ggaggaacac aggacgaagg acggggagc 299

<210> 65
<211> 466
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-C8

<400> 65

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ctaatacattt ggtatgttga gcagcagaat gcccaagggtg catatagttc tacagaagag 120
gtgaaggagg aagtaaagtg catcaaagcc attatagaga ggctgatata gagggaaggc 180
catctttag tagatagcga aggaacagcg gcagcagaag gtgctgcagc aagggcatcg 240
gagcacagaa tcctggctgt taaccogaac tacgtcattg attgattaac cagctgagga 300
cacagctaac tagatccatc atatgtgggt gaccaataga gcagacattc aaacggaaga 360
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agcataagat ctctggaatt gtatcttcca tccaaggttg aaatgt 466

<210> 66
<211> 458
<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-001-Q1-E2-C9

<400> 66

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gcggatgggc ggtgaggccc gtagggagtt gctgtataac atcgaataca gtgccgagta 120

ctgaagcatt tgatTTTgat gatgccggtg ttctttcaat caagtaggca cgtgtagtgt 180

ttgccggtac tcgaagagca cagaggctgt agtctgtaaa ttatactttg taacagtttt 240

cctaatacatt cttcagtatc ccaggcttcc ttttttcgct ggagagacag gatgagattt 300

tatttgttag gatttcagaa taaggtccta atacatttgt ttctttgctc aacgcgctat 360

cttcacagct cagaggatgg atgtaacgtt agttcatcat aatgttatcc ttctgcaaaa 420

taaaaaaaaa nnaanaaaaa aaaaaaaaaa agcgggcg 458

<210> 67

<211> 420

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-001-Q1-E2-D11

<400> 67

gtaccggacc agaattcccc ggtcgacggg tgcaaccggt ggtgggagac gcgcaagcag 60

ttcattaaat ctgttatcga tctttgtttc gaacgtcatc tcaaggccag tgatcttctc 120

catggcctct tcaaaattgt tcagcacatc ttgtacctgt tcagtcatca tttgctgaaa 180

cttatcatga agctccttgt tcgataagtt ctcccagtca atctcgtcgg cttgtgatcc 240

tggcatggtt agcagcatta gaatcacaca ggaatatgat cctacagact actaagaagt 300

ggtggtggtg tatcacacat ctgtcatgca aatctcaa atctgaccagt tcttacccaa 360

cagcacgcgg tgatcggcaa ccgttgtant caacatctcg caatgcttgg atagagcgat 420

<210> 68

<211> 422

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-D12

<400> 68

gtaccggacc agaattcccg ggtcgacggg aactcaaatt tcagaaaagc aaaggatagt 60
cgattgttta caccttcggt gtgtcaatgc aacccttctt tgtattgttt agtaaacatt 120
ttgatgtgcc cagtgttgct cgcaaacata ggatagttga ttgaacaagc tcattctagg 180
tttctagtgc attgtttctt gataatagtt gcttttgctt caatgtattt gacagcattt 240
cagtacacac ccctttgggt attgtcgcaa ctttctgtta ataagaagaa agaaccaaga 300
gaatacaaag tgctttgttc taacaaaaaa aagaaaaaat tcaaaaaaaa aaaaaaaac 360
aaacaagaaa caaataagat aactaagtag taaacaaaac aaaatagaaa ggggaaacaa 420
aa 422

<210> 69

<211> 441

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-D2

<400> 69

tacgcctgcc ggtaccgtgt cctaggctcc cgggtcgacg ggaagaaga agaagaagaa 60
gaggaagaag aagaggaaga agacggaaga gaaagaagct gagacgactg ggcagaagca 120
gacatttgac actactgttg aaaattcagg ggcagagcct acagagagag acacggttga 180
cggaaaacag tctagcaagt caaagaagag caaacgtaag cataatgatg gtgcacctgc 240
cgtagaggtt tctgctggcg atcaaactgt gacaaggga gataagaaga gaaggaagga 300
accagttgtg ctggaagcca gcaaccaaac ccaaacaca aatgaaggtg agaatagaga 360
gattaagaag agaggaaagg aaagcagtaa agccagtcca gacttttagtg agaatgcac 420
tgctggggga gaggaagctg g 441

<210> 70

<211> 459

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-D3

<400> 70

cgctctgcagg tacctgtccg aaactcccg gtcgaaggga attcgagcgg ccgctttttt 60
tttttttttt tttttttttt ttgcccaaag aaacaccatt aatatttcat gaggtaatga 120
aacagggtgt tcccacagaa ccaacacaag ttacaggaag acatgggtctg aacagctgac 180
tattacagaa aaccatccta gcctaggagg aggtgaactt ggtgacagcc ttgggtgccct 240
cggagacggc atgcttggcg agctcgccgg ggaggacgag gcggacggag gtctggatct 300
cccgggacgt gatgggtggc ttcttgttgt acctcgcaag cttggccgac tcgccggcga 360
gcttctcgaa aatgtcgttg atgaaggagt tcatgatgga catggccttg gaggagatgc 420
cgatgtccgg gtgcacctgc ttcagcacct tgaagatgt 459

<210> 71

<211> 480

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-D4

<400> 71

acgcctgcag taccgtgtcc gaggtcccg ggtcgacagt cccttgaatc tctgcactta 60
aatggagcca ctagtgcccc tcggttagct gaagacgatg aaaattccgt tgctagcgac 120
ttgcattgct ttgagttgaa catgcatgga gatgctgtgc agactcatga ctttgcagga 180
actcgacgaa cagtcgcoga ctgcatgtat tcaccaatga gaagactgga gttttccgat 240
ggtgtgtctg ttgaaggctc gaggatctca accgcaaggc ctcgttcaga aaaaggcaag 300
gtgaagccag gcagcagcaa agcacagctg catacttcgg caccagaaat cagctcccg 360
aactgtgaca ggatcgatcc tatagatgtg cagaatgaaa cagtcatgac ccaagtatct 420
cgacggttgc atgatgacct gctgaagatc aaatcagagg ctctcagca tgcatttcta 480

<210> 72

<211> 465

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-D7

<400> 72

gtaccggtcc agaattcccg ggtcgacatg ggtgtagacc acgacctgac taaccacaca 60
aatccctagt ccagggtttat cgcctattca ggttccatcc gtagggagtc cgaccgaggt 120
ttccacatac ggccccgaac gatgtgtata gggtttcgag acaccaaacg ggcgccccgac 180
atacctggcc acgtacctac cgcatacacag cccaccccaa gggtcagcgc tgtgcacggc 240
ctccattata ctacaaacac cttgcaactc ctggacagag gacaaggggtg gttaataagt 300
cgagcgggggt catatttcag ggcccaatgc atggtagtag ctgattctta atcacacata 360
cagatctcag ttcttaggat cggttccaat gaaacaaccc accatgtact cctacatggc 420
ctctcatcga tacctttacc aaatcatggt caacacttaa ctctc 465

<210> 73
<211> 449
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E2-D8
<400> 73

taccggtcca gaattcccgg gtcgacgggg taccctgga tccactatgc aatagaccac 60
tcgggcagtg ttgcatagg cgacacgcag agcccgact gtcagatggg agagcgccaa 120
cggcctttgg acgatgtcag gaacggggga ccttgaagga tcaggaagag aaacatctga 180
gccaccgtca gactcatcac cgtcggagcc agcgttgtca ggcgcctgaa tagcatggga 240
tcagtccatc atcgcccgca gcttcacttc acttcagttc agctcagcat actagggaga 300
ccacggggaa tgtgagagta ctgacatatg acccaatcgc gacaaagcct tgtgtgcaaa 360
caactgtggc tagggataag agttcctcgg ctgcaacttc caataactaa gctcgcgtaa 420
aagtattagt tagcgggtct tggttgaat 449

<210> 74
<211> 423
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-001-Q1-E2-D9
<400> 74

cggaccgaaa ttcgcggggtc gacgggcagc cattctagtt gcacaacagt atataattta 60

gtctcatctc caaaaaattt gaggggtgcc caagagtatc tttagcacc ctagacttta 120
tacttgaca gtagtatcca attaatggc atcctcgaca attctagttg cacaatactt 180
ttctaactag ttgacatact caagactttt tctagttgca caagagtatg tatttagttg 240
gcatccttag catttctagt tgcacagtaa acaaaatact gtgttgatc cctcaacttt 300
tttaatccag atttctaaag aacaacanaa aaattatgca gtgttaacta atcacctttt 360
ttcaccttca tgatattgtg caggggggtg agggtaatga agaagataat gcagaacgac 420
agt 423

<210> 75
<211> 480
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E2-E1
<400> 75

ctgcaggtac ctgtccgaga ctcccgggtc gaaggggagc agtcccatg tctttaatgg 60
gccagttctt actcaagagg tcaacaatcc caactatata tatagtccaa ctcaaaaggt 120
tgtagaacct aattttgtag ttggggcccc gtcgtccact aggttatctg aagctggtgg 180
tcagttaa atgtgtgttt taccagattc tcaggctaag aatgggcgtt ttgtaaagat 240
gctggattca atctcggtc cccctgcttt tgcagcagag ttcccaggca aatccttgct 300
tggtgtgcac cctaacacca tcagcgtgtc taccgaagta atcagcatag gaagcttaac 360
tggtgcttct cgacaaggca agtggtcgtt ccagaaggat gaagacatgg agcttctctt 420
ctccacaggt ttccagcctg ataaccgcat aactgtggg ggctgcaaca cagtgaactgc 480

<210> 76
<211> 413
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E2-E10
<400> 76

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cctgtcttca ccgtgcgcat ggagatttga gcactgcgct acgcgattga ggaagcttgc 120

caaatgcttg ttgacacagt ggatgtaacg tgtccagcat gaccaatacc accttactga 180
 caagcaacat tagatgtgca tttaagcata ccctccacag cgttacacat tacagggaac 240
 gcaacgatag tctttctgct cacggcaagc gtcattatga ccgctatcag tcaggatatc 300
 gtggccagac aaagcctggt ttccacaaga ttgccacgac atcattgaat attgtgctga 360
 agctgcagtg ccatagctgc atgcattacg cgcaacgcgc catcatgagg tgc 413

<210> 77
 <211> 132
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-E12

<400> 77

gcggtccac gggataccct aaagtgagtc gtattagcat cactatgata gcacagcgcc 60
 aggacatgag ctggttctgc tacaagcatg tgaacacaat gtccaaaaca agcatgttca 120
 tactggtaat ct 132

<210> 78
 <211> 453
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-E2

<400> 78

tcccggtcg acgggggatt cccatccagc gtacagacta ggcgaccccc gcttcccgtc 60
 ccctctctcc tccacacgcc tgcctccctc tccctctgct cgccgccgcc gccgccacca 120
 tgggcagggg caagttcaag ggcaagccaa ccggccgccg caacttctcc accccggagg 180
 agatcgcttc tggaacttca gggcgccac gctcatttaa gaagaatgta gctgaagcag 240
 aagaggaaga ggaagaggta gaagaatctg aagaggaaga atccgaagac gacggtgaag 300
 agaagaaaca taaaggaacc gaaggtgtta ttcaaattga aaatccaaac ctggtgaaag 360
 caaagaatat aaaagccaaa gaagctgac ttggaaagac aactgaactc tcgaggcgctg 420
 agagagacga gattgagaaa caaagatctc aag 453

<210> 79
 <211> 460
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-001-Q1-E2-E5

 <400> 79

 gtaccggtcc agaattcccg ggtcgacggg tcatgcatat aggcatacc actagaaaaa 60
 aagacacatc cgtgacattt tgggccgaac gaattttttt tctgtcatac atatgacact 120
 tctatgacga taattgtgac aaaacccggg atcatcatag atgtggtagg ctctacttc 180
 tatgacaaaa aatcatgaca gaaaatgggc ttttcatcct gggcgggctg gagacgcagc 240
 tgcatacatc tctttggggc gtccatgatg gaaaaaccgt ggtagaagcg agggggagga 300
 aaatttcggg aagtttcggg ttacgggtggg aggtcggagg ccgagcgatg cgcgtttctc 360
 tcgtacacgt acgcgcgtgt gtgcgaagcg ttggctctaa ctgaaccgga gcgaagcgtt 420
 gggctctaac tgaaccgag cgattgcact gcaggctatg 460

<210> 80
 <211> 463
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-001-Q1-E2-E7

 <400> 80

gtaccggtcc agaattcccg ggtcgacggg gtcggcgatt ggggaaggct cgccggctgg 60
 gcgacagcga gtcccgatga gtgcaacgaa tggaagccag gcgtcggctt acaacaatga 120
 ttcgggtgcc tgtggcatga tggagagccg ccgctgaaag ctcaagtatg gggcgagttg 180
 gttgaggcgt caatggcacc tttgctcgtg accgaggatg gcacttgac agctgaagta 240
 agatgcaggc caacttcagc ctccaaggct tccctggcac cctcctctgc cactacgtgc 300
 tcaacaacaa ggtcttcgaa gggttagggc ttagggcaac tcgatggtag ccagtcggag 360
 tttgctaggt tacatatgca agtccttttg aaatctcaaa cttctttgtg gtgatgagct 420
 tctgctcatc ttgattgatt cctctacagn tgaagggtgt gtc 463

<210> 81

<211> 465
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-001-Q1-E2-E8
 <400> 81

gtaccggtcc agaattcccc ggtcgacggg tgcctcgcca aaacctcagt gaagatcatt 60
 ggtgcagaca agtgggtcttt acagcataaa tcaattcctg acaagttgca aagcctgtac 120
 aatgatggct acaagttggt catattcacc aatgagtcaa acattgagcg ctggaagaat 180
 aagcggcagc aagctgttga ctcaaaagtt ggacgccttg acaactttat tgagtgtggt 240
 aaagtcccta ttcaggtttt cattgcgtgt ggtactggga aaggaaaagg cacaccggat 300
 gatctgtttc gcaaaccaaa ttcaggaatg tgggtggttga tggcagagca tttcaattct 360
 ggaattgcc a tcgacatgga ccaatctttc tatgttggcg atgctgctgg gagagagaat 420
 gatcatagt acgcagatat agaattcgct aanggccacg gtctg 465

<210> 82
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-F11
 <400> 82

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 ttgatcttca cttatatctt ttggagtagt ttgtcatttg ctctagtgtc tcacttatat 120
 ctttttagag cacgacggtg gttttatatt gaagaaatag atgaactctc atgcttcatt 180
 atattatatt gagagtctta aacaacatgg taatttgctt ggggtataaa atttagtcct 240
 aatatgatag gcatccaaga tgggtataat aaaaactttc atataaagt cattgaatac 300
 tatgagaagt ttgattcctt atgattgttt tgagatatga agatgggtgat attagagtca 360
 tgctagttga gtagttgtga atttgagaga tacttgtgtt aaagtttgtg 410

<210> 83
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-F2

<400> 83

cgctgcagt acctgtccga ggctcccggg tcgacgggct ggaggggaag gtgatgcgtg 60
cgacagcgac catgccggca ggcagggcag ggttgaccgt ggccatcatg atgtttccaa 120
gggagagcga ggcatccgcc atcgcgtagc taaagaagtc gatgccccgg gagaggttgg 180
ccaccgttgc cgggtgtgaaa gggccagatg agttcacttg tgtgttttac agtcttcaga 240
attggagggt gagatgctac agcagtacag ctgcaagttc ccttgcttat ccgtgaggct 300
atatttcaga ggtttgactg tgaccgaatt tattcacaaa gaagctaggc ggtacttgct 360
agtatgcttg actaacaat agcattatga tctggttttg ttctctatac cttattagtt 420
catggatg 428

<210> 84

<211> 480

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-F3

<400> 84

cgctgcagg tacctgtccg aaactcccgg gtcgaagggg agcagctccc atgtctttaa 60
tgggccagtt cttactcaag aggtcaacaa tcccactat acatatagtc caactcaaaa 120
ggttgtagaa cctaattttg tagttggggc cccgtcgtcg actaggttat ctgaagctgg 180
tggtcagtta aattgtgttg ttttaccaga ttctcaggct aagaatgggc gttttgtaaa 240
gatgctggat tcaatctcgg ctccccctgc ttttgacgca gagttcccag gcaaatectt 300
gtctggtgtg caccctaaca ccatcagcgt gtctaccgaa gtaatcagca taggaagctt 360
aactgttgct tctcgacaag gcaagtggtc gttccagaag gatgaagaca tggagcttct 420
cttctccaca ggtttccagc ctgataaccg catacactgt ggtggctgca acacagtgc 480

<210> 85

<211> 466

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-F4

<400> 85
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 ccgcgagaag cccgtccacg ccgtcctcgg cggcggcaag cctgctgac ttgttctatg 120
 gaggaacaag aagatctcag gaggggtgct tgctggcgct acggccatct ggctgctggt 180
 cgagatcatg gagtaccatc tgcacacctt ggtgggccac tgccatcatc tctccctggc 240
 aaccctcttc ctctattcca atgtctgcat ttcatccac aagtctcccc cgaacatccc 300
 tgagggtgaaa attccagagg acatgactgt aaacattgca ctatcactgc ggcattgagat 360
 caaccggggc ttcttcacct tgagagagat tggatcatgt cgtgatctga agaaattcct 420
 cattgtgatc ggagggtctt gggttctttc tgttcctggg agctgc 466

<210> 86
 <211> 463
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-F5

<400> 86
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 aacactgagc atcggctata ggagatccac catggtgaac accgttagac agatgccggg 120
 ttttgccaac acaatgaatt atgagggcga tatgcaaata tcgaccatgc gttcttatct 180
 caaaagtgtc cgggagtccg ttcaccaaag tgtgaatagc cgaaataagt cagatgtttc 240
 ggctgaggat aaattccata gcgttgattt tgatggtacg atcgaagaat atggatgaga 300
 cgctcttgag agtctcctat atgaaaattg tcgtccttgc ctacgggctt tacacttgta 360
 ctcccttatt tctactagct tcgcaatagg agatgtgatg ccgctcatga ctgaggatt 420
 tcccttagga acccaggcca tgttcctctt ctccagctct ttg 463

<210> 87
 <211> 466
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-F6

<400> 87

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caagggcagg ctgagcaagg aggagattga gaagatggtc caggaggctg agaagtacaa 120
gtctgaggat gaggagcaca agaagaaggt ggagtcgaag aacgccctgg agaactactc 180
gtacaacatg cgcaacacca tcaaggatga gaagatcgcc tccaagctgc cggcggacga 240
caagaagaag atcgaggacg ccattgacgc tgccatccag tggctggaca caaaccagct 300
cgctgaggcg gatgagttcg aggacaagat gaaggagctg gaggctctgt gcaaccccat 360
catcgccaag atgtaccaag gtgctggtgc cgacatggaa ggcggcatgg acgatgacac 420
cccggctgct tccggcggtg ctggcccca gatcgaggaa gttgac 466

<210> 88
<211> 460
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-F7

<400> 88

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agcctctggt taaatgtggt tttgtgtttt aattagtgtt tgtgctaagt agaacctttg 120
ggaagacttg ggtgaagtct ttataatctt gctgtaaaaa acagaaactt ttgcgctcac 180
gagattagcg gccatttttt actggagagt gatttttaggt tgattagttt ttcagaagat 240
taatagacaa attcctcagg tccaccaatt tatttcagaa tttttggagt tacataagta 300
tgcgtttgat acagattgct acagactgtt ctgtttttga cagattctgt tttccttggtg 360
ttgtttgctt attttgatga atctatgagt agtatcgag ggtatgaacc atagataagt 420
tggaatacag tagatattac acgaatatga atttataatg 460

<210> 89
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-G10

<400> 89

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ctcaccggcg cgcgtgcagc ggcagatgct gccccgcaact tccccctgaa aggacctggc 120
 tgggaggtcg tgggtggtgc cggggggcgggt atgctctcag cgtccaccag ctgagccccg 180
 ggccccgtcc agtgaccggc ctgtcaacgg cgaccgacgc cttggtattc tggtgcttcg 240
 gctttgttcg tcgcctgtgt taaggccgat gtttttgtga acatgatgtg gacatgacaa 300
 cggcatccta cccccctaa gtaattatgg acgaccgagg cgttgcagtg tgtactgtac 360
 tgcacccct agattaggag ctgategatc ctttggcgag ctgtgttctg atgtaactcg 420
 agct 424

<210> 90
 <211> 369
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-G11
 <400> 90

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 ctgttcaccg gcgtccgcca cttcaggcac tgagcctaac ctgagtcctg atggtcatat 120
 caccggtcta ctgtcagtca gtccgccgtg ggaacttgcg gatgtttgtc gcaataagac 180
 agacgcaggt gattctgagt ccaactagga ttagttgtat gacgggtggcg aaagcatttt 240
 gccacgtacg caagtgagga cgcctagggtg ttcgtcacat tgctgagcca gcagcggctg 300
 cgtaataaca aggtcggaaa accagggggc atgtactagc taaagtaagc aaaaagtgtg 360
 tttgtattc 369

<210> 91
 <211> 379
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-G2
 <400> 91

cgggtcgaca ggtcatcttc atcttcgact tctacttcac cataatcatc cctgccgtac 60
 acatcttctg ggacaacctc actctgatta caacttgcta gaatactcca tgtgttcat 120
 ctacatcttc tgcgcctgat acattttgct ctactgctta acctacatct tttagagcat 180

ggtcgtggcc cacttctgta gaaactgcta ctcaactcatg cttcacttat actactttga 240
cagtccttta gaacaacatg gcatttgcta cgggtataaa attgggtccca gaatgggtacg 300
catccaagtt ggggtataata aaaactatca taggaagtga attgggatgcc atgatcaact 360
tgataacttga taattgtgt 379

<210> 92
<211> 480
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-G4

<400> 92

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tgcagtacat catcctcgac aggggtgatgc agcagccatc agcagcatcg tcaggagggg 120
catgctggat gagctcaaga agaccctggt caggaggagc attcaggtaa gaacagagca 180
acacaaattg tcatgtttct aagggaaata gagcatgctt tgtgatatga acaatggctg 240
atztatcggt ttgtaaacct aaactttcca acaaacttgc gagaaattta tattcagatg 300
gcacatggaa atttatattc agatgatatg gctacttcat attagggaga tattttcgag 360
tggagagcat attaagttac catcagtttt cttgacatac caaattgatg ttggaaccgt 420
atgcattggt aatgttaatt aattgccatg gcaaaaatac tttttaataa agtcgccatc 480

<210> 93
<211> 460
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-G5

<400> 93

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gtaagctcca tgcattggca cggcatgcgg ccggtacgta acgtacttag tctgacgacg 120
actactcaat attatgttcc ttcggtaaact actccatata tatctgccgt tcacgttgaa 180
caagtctgcc aagtgccaaag taggaatata tatattcttt ccaccaaaaa aaaaaaaaaa 240
aaagaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360
 aaaaaataaa aaaaaagcgg gccccccaaa ggtttcaaac ttaatttccc gttcaaggaa 420
 atttaaagcc cttcaaaagg ggcccccaat ttttaatttcc 460

<210> 94
 <211> 463
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-G6
 <400> 94

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 atacctacct atttatggca tttccatagc tattccgaga tatattttcca tgcaactttc 120
 caccgttccg ttcacatca tcatgacatg cattactttt gtcacattgc cattgcatga 180
 tcatgtagtt gacatcgtat ttgtggtaaa gccactacgc ataattttta tacatgtcac 240
 tcttgattca ttgcaccatc ccggtacacc gccggaggca ttcacataga gtcacatctt 300
 gttctagttt cgagttgtaa ttcacatgtt gtaatcaata aaagtgtgat gatcatcatt 360
 attagagcat tgccccaaaa gaaaaacaag gaaggctaaa aagaaaaaaa ggaaggccaa 420
 agaaaacaag cggcgcgcta taaaaaaaac aagcggccgc tct 463

<210> 95
 <211> 456
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-001-Q1-E2-G8
 <400> 95

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 cgtcactact ggggtgtgcg tgtccgcggt cagcacacca agactaccgg caggagagga 180
 aagactgttg gtgtctcaa gaagcgataa gctgcttcac aaagattcct catagctttg 240
 ctactactgt gttgggtccat ttccagaatc ttaagggagt gttcttattt agatgattac 300

cttggatgat gttttgccct agataatggt ttggttctgg aacctttaat atattgtatc 360
 ttgaattctt tgttgaactc gtacaagagt ttgttttggc atgtgcttcc agtgaaaaaa 420
 aaanaaaaaa aaaaaaaaaa aaaagcggcc gctcta 456

<210> 96
 <211> 453
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-001-Q1-E2-G9

<400> 96

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 atttgattga tgacgggaag aaccccgatg agttcaccag ggacgtgttc aacagctgca 120
 tcgccaagaa ccagatcacg aagggcaaga cggatgcttt caagagcctg aggaagcatc 180
 ttcttgagga gctggaagaa gcttttccag atgacgttga agcgtacaga cagatacgtg 240
 ctacctctgc tgctgagtca aagagggttg ctcagtccca aagtgttttg cctaattggag 300
 atgccaaagt gaaacctgag cattgagaga ataaccaag tgcaaagagc aagatcttgc 360
 tttatatttc ctatagnttt tottaagaag gcttntgtga acaacaactg atataacctt 420
 gtatgtgctg ctccctcata tgagtgatca ata 453

<210> 97
 <211> 389
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-H10

<400> 97

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 tgtacacacc ttttgggaga agcccacttg attataattt gctagaatac tctatgtgct 120
 tcacttatat cttttgagct tgatagattt tgctctagtg cttaacttat atcttttaga 180
 gcatggcggt ggctcatttt tgtagaaatt gctagtcact catgcttcac ttatattatt 240
 ttgagagtct tttagaacaa catgggtattt gctatgggtta taaaattggg cctagaatgg 300
 taggcatcca agttgggtat aataaaaact atcataggaa gtgaattgga tgctatgatc 360

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aatttgatac ttgataattg tgttgagat

389

<210> 98
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-H11

<400> 98

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cttcgccggt gcatccaaac cccgtgatat gatagctct atcacacata aacctcctta 120
tatcttcttc aaaacagaca ccatacctac caattatggc atttccacag ccattccgag 180
atatattgcc atgcaacttt ccaccgttcc gctcatcatc atcatgacat actttacttt 240
tgtcatattg ccattgcatg atcatgtagt tgacatcgta tttgtggcaa agccaccatg 300
cattatTTTT catacatgtc actcttgatt cattgcacca tcccgggtaca acgccggagg 360
cattcatata gagtcatacc ttgttctagt ttcgacttgt aatccttggt ctgtaatcaa 420
taga 424

<210> 99
<211> 213
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-H12

<400> 99

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atacgatcaa catgaagatg ttcacgatg ttgactagtc cgtctcacgt gatgatcaga 120
cacggcctag ttgactcgga tcatgtttca cttagatgac tggagggatg cctatctaag 180
tgggagttca ttatataatt tgattagatg aac 213

<210> 100
<211> 389
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-H2

<400> 100
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 tgcttaggat ggagtcgccg atttgctttg agaactgtaa gcgtgtttta cctgacagcg 120
 cctgtaattg taggcccttt ccgcatactt cacagcttgt tgtcttatga ggtgctgcag 180
 ggcagcaggc tggtttatgc cgctcgggc attattatca tttgtaactt gtagagtg 240
 acattaatct caggaggaca tagacataat acttatgctg ctgttggtgt aacgacctt 300
 atgcctctgc cttgtgttgc tattcataaa aaaaaaatta agaaaaaaaa aaaaaaaaaa 360
 aaaaaccaac acacacgaga aaaacaaac 389

<210> 101
 <211> 485
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-H4

<400> 101
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 ggtttaagtt gtcgtgagcg atatgaaaca actctcccct cctgcataag cactcctcca 120
 agtcctcgat gtgaagcatc acaatacact tgataatcct tatgttgatc tggaagaatt 180
 aacacggggg ctgtaaccaa aggtttcttc aactcctgaa aactggcttc acattcctca 240
 gtccatttga acttggtgtc cttcttttagc aactccgtca caggtttcac aatcttagac 300
 aaattctcaa tgaatcttct gtcgtatctt gcgattccaa gagaactcca gatctcccca 360
 aatgacgtgg gtgcttccca atttggttaca ctgacaacct tgggtggggc tactgctatt 420
 ccttcttcgg atatagatgt ccgaggaatc caacttcctt caacaaaaac tcacatttgc 480
 tgaac 485

<210> 102
 <211> 444
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E1-A1

<400> 102

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tgcaccacga tcgaaattac tgcaccggag cctctggtgg tcgaaattac tgcaccggag 120

cctctggtgg tcgaaattac tgcaccggag cctcctcgct acccctgga cgatataaag 180

gagatgaaag aatgtcatct gtattatcct atcggaaca tgtccatgaa ggtagccatc 240

ggcagtgtt taccatgttt acctggagca ctccaccaca acaaccccat tcaagatggc 300

tatgctctg tcacgggtga ggacatagtc caagggtttg aggacctgga gattgacatt 360

gtacacctg aaggggagaa aagacttga gatgtcaagc gccatttcat tctatggcaa 420

aagaagttaa tcaagtttcc aggc 444

<210> 103

<211> 393

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-A10

<400> 103

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gacgggacac ctccgcctct accaagtgg atcagatttc cagggttctc ggtgagattt 120

tacagttttt cgtagtttag atcgagtcgg ttcttcatac ctatagtcca cgaaaaagcc 180

aacaaaaaac attagggtta gttcatccca tccgaaccaa tctgagcctt gcataatctt 240

ttctgtattt gctttgttga atttgcggtt gcatcgctgt gttcagttgc tgggtcttagc 300

gtctagtctt ttggagtctc gagttctgtt cacaagttgt cagccgtcg ccgcaccatc 360

atcatctgcc ctggccatct acgaccagcg etc 393

<210> 104

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-A11

<400> 104

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ctcttgccac tctttattcc atagtccata aaagctttac ccaaaacttg aaaacttcac 120
aacacaaaac tcaacaggaa atcttataag ctccgttagt gaaagaaaac aaaaccacca 180
cataaggtag agtaatgaac tcattattta tttattttgg tgttaaacct actgtattac 240
aacttcctta tggtttataa actaatttat tagccataga tgcactgaaa taagcaaaca 300
acacacgaaa aacagaatct gtcaaaaaca gaacagtctg tagcaatatg taactaacgc 360
aaacttctgg aactcaaaaa atcctaccaa aataggacgt actggacaat ttgtttattg 420
atcatcatca aaaagaatca atgc 444

<210> 105
<211> 389
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-A12

<400> 105

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catattgctc tttgtatgat catgtagttg acattgtatt tgtggcaagg ccaccttcac 120
aatttttcat acatgtcact cttgattcat tgcgtatccc ggtacaccgc cggaggcatt 180
catatagagt cataccttgt tctagctttg agttgtaaat ccataaaagt gtgatgattt 240
tcattattag agcattgtcc tcgtgaggaa aggatgatga aggctatgat tccccacaa 300
gtcgggatga gacttcagac tttacaaaaa gaaacataag ggaaaaatgt tagtggtcga 360
aacatcaaaa agccggcccc ccaaaaggt 389

<210> 106
<211> 459
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-A2

<400> 106

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ctacattaca agaacattgg tgtaaggaat gcttgaacta tataccttgt gagtcgtcaa 120
gacgcctgtt gatcaatgca gtatcactct ctgcaatatc cagctttcgc tgcagttcgg 180

ccacttcgta tttcgggtag ccgcaggagg agaggcagcc tgtgttccaa gttaagtcaa 240
 ggtagtaac tgagcatatc tttttgatcc tccgattgct tccttcggaa ggcaatccga 300
 gtctcagggg ctactgcata tacaacaggt gcattctatc aatatcattc aattggcaaa 360
 actacatcac aaacctcaaa acctcttaga atgctcgaga aaggctcgtt caatccgctt 420
 ttcacggata gaaccttttt gaccaccgta gccatcaag 459

<210> 107
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-A4
 <400> 107

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 tacgttcaaa gggtaatgct cctcactccg caccatatac tcggcctcat agccgtgtca 120
 acgacattgg tgtctgccct aatccacatt aaagctatct cacagcagac gttacgggac 180
 tctcccagtg acacaatcaa tgggaagact ctgtcgtcca ccgtcacac tatcatgcaa 240
 cgcgaaatcat ctactcaatt cattaagctg aatgcgtatc acgtccagaa cttgataagc 300
 atcttcaaag gtcataatg agtggccaat acttgagtca agggaagcac aatgtcatat 360
 gtagaccacc attatgggaa cttacatgca tatccgtagg agaattgtgc ctctcacgaa 420
 tagtccagaa 430

<210> 108
 <211> 407
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-A5
 <400> 108

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 gccggaggct gatgctgcgg cgagcggctg ctgttgattt cattcacgca cgctaataccc 120
 ggacatctat ctatgatcta tctttatctt tgtggaggat ggatgaaaac gtttggtgtt 180
 tgacgaagtg acatctaagc agctcgtttg tgtcgttttc ttttgcttgt gttgctgtat 240

atgatatgaa tcagtgggtc agttgatgct cctcatgttg aatcatcaca aaacaaaaca 300
gagtaccttg gcagctatat aatgtacgta ttattaagct ctataaattt actcacgagg 360
aatcaatcta tttgtgctga aaaaaaagaa gaagagaaaag aaaaagg 407

<210> 109
<211> 399
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-A8

<400> 109

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ctttcttcag tggccacgtc atattgagag tatgtgacag atgattgaat ttttgcaaatt 120
atttctccac agactgactt ccttggagga ggcgcagaaa ttcattgctac ttagtcgtca 180
taattccgc agggatgtga tttttctgga atcggtcctt gaattctgac caggtaattt 240
cttcatcagc aaaccacatg gctttttcat attccacca tatggcagca gcaccttcaa 300
gataatgtgt tacatatgga accttatccc cttcatcagt ttgagcaacc tcaagcttct 360
ttcccatagt tctcaaccaa tcatctgcat ccaagggat 399

<210> 110
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-A9

<400> 110

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caatttgatg cttgataatt gttttgagat atggaggtag tgatattaaa gtcattgctag 120
ttgggtgatt atggatttaa agaattgctt tggttaaagt ttgtgattccc gtagcatgca 180
cgtatggtga accgctttgc gatgaagttg gagcacaatt ttatttattg attgtcttca 240
ttatgagtgg cggtcgggga cgagcgatgg tcttttcccta ccaatctatc cccctaggag 300
catgcgcgta gtactttggt ttttgatgac ttctaaattt ttgcaacaag tgcattgattt 360
cttttgacta atgttgagtc catggattat acgcagcctt tcacccttcc agcatggcta 420

gcctctc

427

<210> 111
<211> 401
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-B10

<400> 111

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acacggacgt cattgcaa at catggaggtc cgacattggc ccgcgaggagt gtttactaat 120
agcgaagtgt tcatgtactc gcttttaagg ccttgcatga atgcaaaatc ctctgacatg 180
aatgaatgtg atgcacctgt atcaaataaa acagatgcag gtactgaatt tacgaggagt 240
gtacccatca cagtagcagg ctggctctga gcttcattga gatcaacgtg gttggcatga 300
aaatgaccat aagacatgtc attgtttag cgaggctggg tgcttccacg acgagctgcg 360
ggaaggggca attgattcgg gttcggattc tgatagcagt t 401

<210> 112
<211> 439
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-B12

<400> 112

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aagcaggtgc acccgacat cggcatctcc tccaaggcca tgtccatcat gaactccttc 120
atcaacgaca tcttcgagaa gctcgccggc gaggcggcca agctggccag gtacaacaag 180
aagcccacca tcacgtccag ggaaatccag acctccgtcc gcctcgtcct ccccggcgag 240
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ggttccgtcg cgggtgtctc aggggtccgt ccccggtgtc tcttctagta gcttttgtgt 360
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gtgtcagggt tgtatggac 439

<210> 113

<211> 456
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E1-B2

 <400> 113

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 tgcattgctt gtgagtttta tttgaagggtt atatttaaag ctgtagtgat ggatctcctt 180
 ggtgagccac ctactgtaca gtgccatgtc tatgacaagc tatgcaacac aagcaatcta 240
 gtcaaaatgc tgtcgattct ttttgaagtt tgttactgaa tgaatacctg aaccaaacgg 300
 tcactctgct atcatttttg ttgtgaatct tccccttctg ctggaattgg tcctgcttca 360
 gctgggtcca accgaaggga actgcaccaa cagtaccgac gaaagagaac tgaagaaagc 420
 agcagcagca gcaaagatcc cctgtacata ctctca 456

<210> 114
 <211> 462
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E1-B3

 <400> 114

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 actacctctg atgaggatgc ggacatagat gatgaaatga ctagatacca aagttctgat 120
 tcacatgttg tggagaagaa atatacattg acaaaatgca gcgctgaacc tgagaccaat 180
 aaaacaaagc attctagttt gagttatgag gagcaacctg tttcttcggc accaataaga 240
 gcaagcaaaa ctgttgctgt tccagttaac cccatttccg tggaacctcc aaattttgga 300
 acacaaaaag atgttcatgt tgtggagaag ccggacatca caccatgaa tgctaattgtt 360
 gcctctccag ctattaatgt caaagaatta ggtcatggag aagtccaaaa ggattcacag 420
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<210> 115
 <211> 370
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-B4

<400> 115

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ggatccctcg cgtcggtagt gctgctgatt ggtctaacca cttctagctc gatgaccctt  120
gttgtaaact gccaatcttg aactgaatc gctgagacac cgactgcat ctgcatttta  180
tttttgagca gtttacaacg ctctagacaa tgctgtttca ataaatgtac tgtctgatgg  240
gtaatgatac tgctgtaagt ttaccgatac tcgaagaaac tctgatgcca ccacctgggtg  300
gtagaggttt atcagcccc cttatatatgt ctcaataaat aaagttcagt gaaggcttag  360
tttgtttgtc                                     370
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<210> 116

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-B7

<400> 116

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ttatatttgcg gaaaagcttc tcacaattgt gagcgatata cttctccatt tcaaaggaaa  120
aggcaagtct gaatcagttg gaccttcaaa tagtgaactt gatcctcact tacataaagg  180
cgatgctgca ttggagttca ttaaacatat atgtgctgtt cttgctctcg atcagaatgt  240
tcagcatgat attctgagaa tgcgaaagaa cttgttaaag ttgggtccgtg taaaggaatt  300
tgctccagaa gcacagttcc aagacccttg tgctcattc attctcccga acgtgatttg  360
cagctattgc aacgattgcc gggaccttga cctctgccgc gactcgacgc tgcaaggcca  420
cgagtggagg tg                                     432
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<210> 117

<211> 453

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-C1

<400> 117

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ttgcatgcct tactttccgc tgctcatata gtctttgcat gcttgcttga attgtgttaa 120
gattgcttga cttgtccaaa gttgcaaaag tctgccaaga actgaaattg ggaaaaggat 180
aagtttttat ttgggtcaagt agtctaata ccccccccc tctagacata ctttcgatcc 240
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atageccttg tttcacaacc taggagagta tggcgtctag caagggaaat taccaccgta 360
gaggtcctta ctttgatggg actaatcttg ctagttggaa gcataatatg aaaatgcata 420
ttcttggaaca taaccccatc gtatgggcta ttg 453

<210> 118

<211> 464

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-C3

<400> 118

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tccgaacgga caacggagag aaccgggaga acccgaacgg atgcaagttt tgaaaaacat 120
gcggatgaaa agcagatgat gacatggcaa aatgcaacac gcaagaaaat gacatggcaa 180
caacgacgaa taaccggcag acacccggcg catcgatcc ggggcgttac aacactcctc 240
cactaacaag agatctcgtc ccgagatctt aggaccgaga cggaagggga aaaggaagag 300
gtgaaacaag aaatcaagag aagaagcaaa gaatcgagag cactcaagaa gaagagagga 360
acgacgagaa tcttaaagtc acggaaacag atagactatg aaacaactcc gggttgaacg 420
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<210> 119

<211> 442

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-C9

<400> 119

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 gggaatggaa tacgggatgg tttcaatcca cgagattgtg gtttaaaccg atgaagatct 120
 ttgtcgaata tgggagagtc attatggtca tccagggtccg gctagtgatt attgattgga 180
 aagggtgtctc gatcttggcc gcatgttctc gaacccgtag ggtcacacac ttaatgttcg 240
 gtaacgttag ggtcgtaatg gggattcat aatggtgagg ccgaatatag ttcagagtct 300
 cgtatggggc ccgaaatac acgaggatct ttagaatggg ccggagatga agattcatat 360
 aaggaaagtg gttttcaggg ttccagaaaa tgtttgggat ttttcagtac tgtacaggga 420
 aggcttcaga aggttccgaa at 442

<210> 120
 <211> 418
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-D10
 <400> 120

taccggtcca gaattcccg gtcgacggg gtggcgtaaa gcgattgacc caagaagtcc 60
 gggcaatcag ggaatgttcc agcaaagaag gcaatgactt ttccatatca cccatatcat 120
 gaattttttg acttcaaaat gtatgatata atggactctg cataagttga taagacatga 180
 taattaaccg caaaaagcat gggatggat aacacattga aagtaatacc agagagcaaa 240
 tttaacgctt acaataaagc atgggcacag ataacttatt ggttcatctg ccaactgetta 300
 ttatctacca agaaactaca aatgaaatgt ataactaat taggaataag aactccataa 360
 aacattggct ttggtctgca aaccattaat ctgattggag atggaaacta aaccaaga 418

<210> 121
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-D11
 <400> 121

taccggccca gaattcccg gtcgacggga atcctgaaca cggaggacgt gtacgaggca 60
 tggggcacat tccgtggaaa ataggggttcc ccgagaacga tgacccgtac gggtacagaa 120

gccgaaagag aaagatggat cgggaagcag atgttgtggc gcggttggca tcggaaatgg 180
atgtgatgaa gaaaaccgtg agtgtactag tagccgaacg agatgcagct cggg'gcgagc 240
atgaagatca tccagcggat ctcagaagcc agcagcggag aagcagtgtg gcttccacgg 300
aggccccacc ggctgggtgca gatgcaccga cgatcgaaat tactgcaccg gagcctctag 360
tggtcgaaat tactgcaccg gagcctctgg tggtcgaaat tactgcaccg gagcctcct 419

<210> 122
<211> 462
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-D2

<400> 122

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gtagtccata ggacaacgat cacaacatac aatcatacca taggctagct tctagggttt 120
agcctctctg atctcgtggg agatctactc ttgtactacc catatcatca atattaatca 180
agcaggacgt aggggttttac ctccatcaag agggcccgaa cctgggtaaa acatcgtgtc 240
ccctgcctcc tgttaccatc cggcctagac gcacagttcg ggaccccccta cccgagatcc 300
gccggttttg acaccgacac ccacatata ccttcctcaa aacagccacc atacctacct 360
attatggcat ttccatagcc attccgagat atattgccat gcaactttcc accattccgt 420
ttgctatgac acgcttcac attgtcatat tgctttgcat ga 462

<210> 123
<211> 449
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-D3

<400> 123

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tcgaataaaa gcaaattaaa ataaagtgcg gcaaggtatt tttgtatttt tggattaata 120
tatccgaaaa taaaagaaaa taaaaataga tcgcaaagac aaatataata aagaagagac 180
cccaggcccc tagatttcac tagtggcttc tctcgagaaa aatatcaaac ggtgggtaaa 240

tgaattactg ttgggcaatt gatagaactt caaataatca tgacgatatc caggcaatca 300
 tcattatata ggcattcacgt ccaagattag tagaccgact cctgcctaca tctacttcta 360
 ttactccaca catcgccagc tatccagcat gcatttagtg tattaagttc atggagaaac 420
 agagtgatgc aaaaagaaca atgacatga 449

<210> 124
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-D7

<400> 124

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 acttctggtg atgaacagaa aaaagttggt gaagttctca tgataaactc ccaaagcgga 120
 ccaggtttat tattcccaa ggtacttatt ctttgaattg tcataccaag ttgttttgga 180
 acattgcgct gctggcaaca cagattggta tcccagttag ctccaacgtg ttccttttcc 240
 cggcatttat atatttatga atcctctgag acaaattgag atgcacgcag gaatagtgtg 300
 tatggttgat gcataaatca cccctaccta aattttggag agcccaagtt tggccaagga 360
 ttaaagggaa tggccaaatg accatggtca tgcaacaaag ttgtcaatca tccaaagaaa 420
 gcccaatagt ttggtgttac 440

<210> 125
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-E10

<400> 125

taccggtcca gaattcccgg gtgcacccac ctcatctcac aactatagg cttcttttcc 60
 agcagcactg tctcatagaa atcttgctgt tcctttgtgt ggaacctgta atcaacaaca 120
 gttcttcttc ttgtagcata tgggtctatc tctctccatt tccttagtcc agagtccctc 180
 ctgatctgca tgttctcagc cacaggatga gcatcattgt ggtctggaat cttggggttg 240
 agcttctca ggacttgctc tcatcatct tcactcagtag caacttcagg cactggggca 300

ttgtttctct cagcagctgg tatactcctg gtattcctct taggtgcact cttgggcttg 360
gaggctgctt tgggtgcttc tttgggcttt gatgaagcag cccctgtcct gatagcatca 420
accataagcc tctatgcc 438

<210> 126
<211> 428
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-E12

<400> 126

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tctgggtcgc taccgtctct actcgtcgat ggatcgccgg gggcgaaat cctccagctc 120
cttcttcaat tctcacaac tttgcttgaa accagccacg gattcctcca cctcctgctc 180
gcgctcgatc cggagcttcc tcaagccacc catcagttcc tcgacgaccg ctttcagtgt 240
catctccgag gtactgctct gctcatgcag catcttcag ctggtggcct cctcctcctt 300
ctcggtgact aactttagga tcttcgcatt gtcacccatg agttgctcga cgaggctagt 360
cgccttgctc accgaggcat cgctgacctt gacgagcttc atcaagccgt caaccagctc 420
ctgctgcg 428

<210> 127
<211> 400
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-E2

<400> 127

cgctgcccgg tactgggtccg tacattcccg ggtccacggg gacgcaatga aatacaagtg 60
cacacgatgt ggcacgatga agacgccagt tctactgtac aaactgacgg cgaaggctcga 120
acacgccaca tgcacatcgg acctcatcat cgtctcctat gtggctgttg agttggtcag 180
tgtctctgca caagaccttg tcgataacat tgatcaagac gacgagtggg acgccctgcc 240
agacgaaatc aaggatcttc ttggctcgac gcacaccttc caggttttcg acaagtacat 300
gaattggagc ttcacggtga ggtcgatcat ggacgatgct agcgctccag ccccgctgc 360

atccgctaac caatgctcgg ataacgctga ccctgatggg 400

<210> 128
<211> 425
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-E4

<400> 128

gggtccacgg gtgactttcc caaaataaag aaatattgag gatttaataa aaaaatcaaa 60
taagatttta tttcggagtt ttcggtgttt tatttgaatt taggaaaaac gtgcgtttat 120
caaaattgca tgttagggcc cgagtaaagtt ttcaccttgt gcggcttgat tttagaagcc 180
cgtgaaaatt tattttggaa tttttggagt ccgttttagta tttcttttta tttttcttcc 240
gagcggaata ataaaaaaaa cgaaccgact tcggggccgta cccgagcggg acaccgcccg 300
gggtaacctt taaatagcgc cgccccgagc cgccccatcc catcagcccc gcctcgatcc 360
gtgcgcgtca acagagccat caccgtcgcc accgatgatc ccgccgcccg acgttcgtcg 420
cgcct 425

<210> 129
<211> 414
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-E9

<400> 129

taccggtcca gaattcccgg gtcgacgggg tctggggagc gatgattgcc acccagagct 60
tcgctagcta ggcctagctc gcagtgatcg caccatggcg aagcgaacgt acaggagtta 120
gtatgtgctt ggtgaggtaa tgcggcgagg gcagggcccg cgctgctagc tgctgccggc 180
gcggcagcac gcaggacatg atgcagttaa tggaagaacg aaggggagct acaaccagct 240
aggaagggga gctgcagcca gctaggacat gatgcagtga aggaagacat gcatgcagcg 300
gcagtgaact aaagagctct ggaggcaggc acagaacggg cagccccggc gggagaagta 360
aagggcggag ggggaacaga caggcacgcc ggccgtcgcg tcggtacttg cagc 414

<210> 130

<211> 460
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E1-F1

 <400> 130

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 taagtcatgc ctgtttggtt gtcacctgac ttataagtca tctgagcata ctttctcacc 120
 ttgttttttt atgtaaagt tgtgggactc atgtaaaagg ggggtgactta taagttttta 180
 gttgggggtg agcaacttat gacttataag ttgggggtgac ttataagtta ctccctccgt 240
 tcggaattac ttgtctcgga tatggatgta tctagaacta aaatacatgt agatacatc 300
 atttctgcga taagtaattc cgaacggagg gagtaggtcc gtttgacaaa ataagtcact 360
 ttacacttt tcaacttata agttggtgac ttatttggaa ccaaacaggg cctaacatac 420
 actagtaaca tacacgtatt tgtagactat gttactaccg 460

<210> 131
 <211> 300
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E1-F10

 <400> 131

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 ccgaacaggt gagcttaggc cagcaccgat gatcgtaac cttcagtgcc ttcttaaaca 120
 acggactcaa gcatcattct taaagacgat gacactatgg tcatcacact tatgggacca 180
 atctcagtgt cagaacaggc ggatttcgag tacggtatgt tgctcaggac ttccagatca 240
 acgattgcta gatacaagac atatgagttt cacacgcaca atcgggcat caccaggtac 300

<210> 132
 <211> 362
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E1-F12

 <400> 132

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gacaagggtc tccggagcct atttgtgtga tgagagcaag cagcgatccg attgtggcat 120
gtgtgcgtga cgtgctgttg tattcagccg gccggcgacg agtttgctag cgaggtaacc 180
tacgtcgtg agtacatgcg gtacaggcca gccgaaaaca tgaagtaaga ccgtcagctc 240
cgcttcacg tcttggtcgt ccatcgctgc atgtcaccga agagtactag caacgtggcc 300
tgagccaaca gatgatatga aggaaatgtt ggccatggca cggaaggaac cttggtgcgt 360
ga 362

<210> 133
<211> 447
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-002-Q1-E1-F3
<400> 133

gtactgggcc tacattcccg ggtccacggg tgggaaccaa ggtagtgaga taatgtgatg 60
caacactaga ggtgccacgt ggagcggtta actggtcaac tagtcatgtc atgagcaaat 120
acagagttgt acggtgagcc cgtgactgta taataaccac taaacgtaaa tggtgaccgt 180
aatgagtgga tcctgaagtc caatgtgcgt atcgtgcttt cgcttcaaata acaatgatcg 240
tcattgcata tatcgtgaga gaaagatgaa acatgcgtga attttctggg ggcttacttt 300
tagaggacct ggagatagtt ttgtgtgcat acgtgaaagg ggcgtacagg gggatatgca 360
tgagagaga gatgctcttc gtttctcgtt attatgacta actttgtata tagtatatac 420
atatacaaat tcacagtgcg gaataaa 447

<210> 134
<211> 434
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-002-Q1-E1-F4
<400> 134

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ctcgccggg atcctctggc tgcggagagg ggctgttgaa ctctttcaca gcctttctta 120

gttctctgttt tttaaacagc aaggtaaata attgtgggtca agaaggtaag gacgagtaga 180
 gtcgaataac aaataacaat ttaccagct tcgggggttg tacatggcaa atccatcctg 240
 cggtttaatg tggaggaact cctcttcttc tcccttgtag aattcagata gtatcctcgc 300
 caaagatgtg gcggagtctg gacctttgcg accgcagcgg gaggcacgtg cttatccatt 360
 gaagtgccac atggggtttcc cttagattga agtgggtgca ctcccccttat aatacatatt 420
 gacatgactt caat 434

<210> 135
 <211> 445
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-F5

<400> 135

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 gcgttccacc agatcaattt ccactagcgc aaggtaaca catgcagcag aaaatgaggt 120
 gtcaccggtg gccatgacgc agtgggtgggc ttggtgatga catccgcctt gccgaactcg 180
 tgggtcttggc ctcgttgcat cggaatggaa acctttgaga ggatccctcc gcgctgggtcc 240
 ttgctctctt agcacaaagg aggaaattgt tcctctatg cccattgggtg cccgcctggc 300
 cttggttata atgactcacg tcactgtgag cctcgtgagg cgggggtacc gcatagaagt 360
 cttcactcct cggtaggcag tctcggggaa ccactcctcg tgagggtcttg gcgtagtccg 420
 cctcgcgagg ccggggggcc ctcgc 445

<210> 136
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-F6

<400> 136

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 taccgtgcat tgccctttct caccttgaga gttggtgcaa acttcgccgg tgcattcaaa 120
 ccctgtgata tgatacgtc tatcacacat aagcctcctt atatcttctt caaaacagcc 180

accataccta cctattatgg cacttccata gctattccga gatgtattgc catgcaactt 240
 tccaccgttc catttattat gacacgcac atcattgtca tattcctttg catgatcatg 300
 tagttgacat cgtatttgtg gcaaagccac cattcataat tttttcatac atggcactct 360
 tgattcatcg caatccatgt acaccgccg aggcattcac atagagtcac attttgttct 420
 aagtatcg 428

<210> 137
 <211> 439
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-F8

<400> 137

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 ggaagatgga tgccaggaag aagagcctga agaggctgta acagcgcacc ccgccgggat 120
 agcgtcgaag tgtggctggt gtagtagtta ggagattcaa tcccctaccc ttgataagcg 180
 acgccagatt cagcaggtgc acagtgggac cgaatgaata aataaaccca agggacatct 240
 gatgaatctg gtggttgatt ggtagaagta tgcctgtagt cagaactgta gtgatgtgag 300
 atgagatgca tgtgagttgc acccctgttg gaataaactc tagtgatgtg caatgacgaa 360
 ctatttgga gaacaaactg tcgccttttc agaaaaaaaa aaaaaaaaaa aaaaaaaaaa 420
 aagcggccgc tctagagga 439

<210> 138
 <211> 389
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-F9

<400> 138

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 agatggatgc caggaagaag agcctgaaga ggctgtaaca gcgcaccccg ccgggatagc 120
 gtcgaagtgt ggctgttgta gtagttagga gattcaatcc cctacccttg ataagcgacg 180
 ccagattcag caggtgcaca gtgggaccga atgaataaat aaacccaagg gacatctgat 240

gaatctggtg gttgattggt agaagtatgc ctgtagtcag aactgtagtg atgtgagatg 300
 agatgcatgt gagttgcacc cctgttggga taaactettag tgatgtgcaa tgacgaacta 360
 tttggaagaa caaactgtcg ccttttcag 389

<210> 139
 <211> 408
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-G11
 <400> 139

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 gacgggacac ctttgcctct atcaagtggg atcagatttc caggttgctc ggtgagattt 120
 tacagttttt cgtagtttag atcgagtctg tcttcatacc tatagtccac gaaaaagcca 180
 caagaaaaaa ttagggtagg ttcattcatat ccgaaccaat ctgagccttg cataatcttt 240
 ttagggtttt gctttgttga atttgcgggt gcatcgctcg gtctagttgc tgggtcttaga 300
 gtcgagtctt ttagagtttc gagttccggg cataagttgt cagcccgccg ccgcaccatc 360
 atcatcgccc ctgccatcta gcaccaccgc accgaatccg tatccagt 408

<210> 140
 <211> 383
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-G4
 <400> 140

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 taagcacgaa gggaatttag acaatgtatg agttgatgag ttactctcat tagaacgtgg 120
 gcactggtag ctaatccgct ctctctcctt tttttcatcg ctctctcat catctttttc 180
 atccaatgag ctacagttt catcagtttc ctcttcata gactcctgca aaatattagt 240
 ctcttcttgg acagcggaga ctctctcaaa agacttacat acacgtacat acaaagaaag 300
 cggtcgctca agaggatcca aacttacgta ctctgcatg ctacgtcata gctcttcgat 360
 agtgtcacct aagttcaatt caa 383

<210> 141
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-G6

<400> 141

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tcatcatgta gaagatgccg gacatgatga tgaggaagat gcgggagcag acgaagggca 120
tgatcatgaa gatgaagatg ccggcggagc agacgacgat ggaccatcga tgggctgggt 180
gcaggaccct catattcaag agctgcttct caagcagacg gataacgcaa gagctgccgc 240
ccgagagaaa gccaaagctag atcaactgga gatagacgcg gttactccat tgtatgaagg 300
atgcaggccg gaggataccc gcctcaaagt aacgctcatg gctctggaga tgaaggtaaa 360
acacaaaatg accgacgcat gcttcgacga gaacatgtca ttctggcacg aacgtcttcc 420
caaggggaac aagtgcccg cagtt 446
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<210> 142
 <211> 441
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-G7

<400> 142

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cggcgtccaa ggaggccggc ggcgagggga agcagcgggg caggaagaag ggcagcaagg 120
ccaagaaggc cgtggagacg tacaagatct acatcttcaa ggtgctcaag caggtgcacc 180
ccgacgtggg catctcctcc aaggccatgt ccatcatgaa ctcttcatc aacgacatct 240
tcgagaagct cgccggcgag tccgccaagc tggcgaggta caacaagaag cccaccatca 300
cgtcccggga gatccagacc tccgtccgcc tcgtcctccc cggcgagctc gccaaacacg 360
cgtctccga gggcaccaag gccgtcacca agttcacctc agcctaggct tcatcgctgt 420
cgttttaacg aatcgatgat g 441
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<210> 143

<211> 458
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-H1

<400> 143

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 aatttggtgc atgaggtgct cttttaattg ccttccttat gtgtgaaggt cgggatcgca 120
 cgatgggttaa ctctaccaaa ccttccccct aggagcatgt gtagtagtac tttgcttcga 180
 gggcaagtag acttttgcaa taagtatatg agttatttat gactaatgtg agtccatgga 240
 tatacgaca ctcatccttc cactttgcta gcctctatta taccgcgcaa ctttcgccgg 300
 tatcatgcac ccattattta ccttctcaa aacagtcacc atacctacct attatgacat 360
 ttccatagcc attccgagat atattgccat gcaactttcc accgttccat ttagtatggc 420
 acacttcaac attggcaaatt tgctccttgc atgatcat 458

<210> 144
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-H10

<400> 144

taccggtcca gaattcccgg gacgaaggga ccgttacaca tgatgatttt gatgaatata 60
 atatgcatgt gcttgatgct cctacttgca attattatga gagaggaact atatctccac 120
 ctctctatgc ttcccacatg ataaaattgc aagaaactgt ttatactatg cattggcctt 180
 tactttgtgt gcatgaattg ttcttttatg acatgctgat gcataggaag agagttagac 240
 tttgttggtg catgatatat gttactttgt gctcactact aaattacaaa tcattgttaa 300
 ttaaaattgg ctttgatata ccttgggatc cgggtgggtt cactacttga gcactatatg 360
 cctagcttaa tggctttaag gaaagcgctg ccaagggaga aaaccggga gttttagaga 420
 gtcatttatt tctgttgagt gc 442

<210> 145
 <211> 259
 <212> DNA

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tattttgagg atgcagggtga tcgatggaat ttgcttccag gccagagaca tggaaatgga 180
gtgggtccgc ggagttggca tgcgcgcgat tgcacgctgt caagctcttc tggaagaagc 240
ccaacagccc caagagcctc ccagcgccag cagctccgta cgcggaggcg ggtcgggaca 300
cttggagtga atggccgcaa ggggtgctatg ctgatcatgg agtgcgagaa gaccatcgtc 360
ggaaggccgc cagctcagcc ttttagctta tattttagta taattgtatg catatgtagg 420
tcgtgagtgt tctgg 435

<210> 148
<211> 445
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-H6

<400> 148

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ccaaaatgcg aaagccacaa taccgttccc gttccgccgc gcagagagac gaccataaat 120
aaagcttaca caacatagcc aacaaggaga ccgttcggac ctgggggctgc cgccgaggcg 180
cgtgtgccat gcacacgat tgcccaacaa ctaagattgc agaagccaac atgatgaaag 240
gataatgcag caaagacgca cgatgacgag gtagcgcaga tttgatttgg gaccttatgt 300
tctgccgact gtagggggga cccttctag atcttgtcaa gcttctccgc cttcaccacc 360
gggttggcct tggcgatggc gtccatggcc gcggcgcggt agtcaaactt gcaactcgtgc 420
ttgtccgagt aacggtgcgt tgcgc 445

<210> 149
<211> 338
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-H7

<400> 149

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cggagccgcc taaagagaac gagcgccgc tccggccacc ggctagatct gcagcaccat 120

cactccacca gcccaaccgc gtgatctacc tgctgtcgcc ggcctctctt ccctctgcag 180
 caccaccaac tgaggtgggg ttcaacagct cacattccta catctttgga aatgcatccc 240
 catctaacgc tacacaggca tcctatgtgt gctgagatta ttgaagaatt ccagaaatgc 300
 catgtggatc accccatcag acgattcttt ggtgaatg 338

<210> 150
 <211> 396
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-A1

 <400> 150

taccggtcca gaattcncgg gtcgacgggg agggcccacc ggctgggtgca gatgcaccac 60
 gatcganatt actgcaccgg agcctctggt ggtcgaaatt actgcaccgg agcctctggt 120
 ggtcgaaatt actgcaccgg agcctcctcg ctaccccggtg gacgatataa aggagatgaa 180
 agaatgtcat ctgtattatc ctatcgggaa catgtccatg aaggtagcca tcggcagtg 240
 ttaccatgt ttacctggag cactccacca caacaacccc attcaagatg gctatgctcg 300
 tgtcacgggtg gaggacatag tccaaggggt tgaggacctg gagattgaca ttgctacacc 360
 tgaangggag aaaagacttg gagatgtcaa acgcca 396

<210> 151
 <211> 441
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E2-A2

 <400> 151

cgggtccagaa aaccgggtc gacgggaccc ttttcggcat caggcctaca ttacaagaac 60
 attggtgtaa ggaatgcttg aactatatac cttgtgagtc gtcaagacgc ctgttgatca 120
 atgcagtatc atcctctgca atatccagct ttcgctgcag ttcggccact tcgtatttcg 180
 ggtagccgca ggaggagagg cagcctgtgt tccaagttaa atcaaggta gtaactgagc 240
 atatcttttt gatcctccga ttgcttccct cggaaggcaa tccgagtctc aggggctact 300
 gcatatacaa cagggtgcatt ctatcaatat cattcaattg gcaaaactac atcacaaccc 360

tcaaaacctc ttagaaggct cgagaaggcc tcgttcaatc cgcttttcac ggatagaacc 420
 tttttggaca ccgtaaccat c 441

<210> 152
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-A4

<400> 152

ctgcagtcac ggtccagaat tcccgggtcg acgggtagcc agtgtcgctg cgcacgtacc 60
 ttcgaggggt agtaatagtg atcacgcacc catacatcgg cctcctatcc gtgtcagcgt 120
 cagtggcgctc gcccctaacg cacactaaag agatttggca ggggcctgca cgggcctcgc 180
 cgatggccac aatcaagggg aagacgctgt cgtcctcctc cgagactagc aggcagcgt 240
 gatcctccag cgactccagc atggtgaacg ggtagcacgt cttgtacttg atactcttcc 300
 ccaagggcca ttagtgattg ccgcatgcct gcgtcaggtg atgcacaatg tccgccgacg 360
 agccccaaaa tggcaccggg cactcatagt agtagacgaa gtgctccttg gaggcacga 420
 ccaggccgctc catgaaac 438

<210> 153
 <211> 366
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-A5

<400> 153

attcncgggt cgacgggggc gaagaagaac atcttcaagc agaaggcgcc ggaggctgat 60
 gctgcggcga gcggctgctg ttgatttcat tcacgcacgc taatcccga catctatcta 120
 tgatctatct ttatctttgt ggaggatgga tgaaaacgtt tgttgtttga cgaagtgaca 180
 totaagcagc tcgtttgtgt cgttttcttt tgcttggtgt gctgtatatg atatgaatca 240
 gtgggtcagt tgatgtcct catgttgaat catcacaaaa caaacagag taccttggca 300
 gctatataat gtacgtatta ttaagctcta taaatttact cagaggaat caatctatct 360

gtgctg

366

<210> 154

<211> 447

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-B10

<400> 154

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acacggacgt cattgcaaatt catggaggtc cgacattggc ccgcgaggagt gtttactaat 120

agcgaagtgt tcatgtactc gcttttaaatg cettgcatga atgcaaaatc ctctgacatg 180

aatgaatgtg atgcacctgt atcaaataaa acagatgcag gtactgaatt tacgaggagt 240

gtacccatca cagtagcagg ctggctcctga gtttcattga gatcaacgtg gttggcatga 300

aaatgaccat aagacatgtc attgtttgtag cgaggctggg tgcttccacg accagctgcg 360

ggaagggcca gttgattctg gttcggattc tgatagcagt tcttggcaag gtgacctggg 420

tggccacact tgtagcacag accatta 447

<210> 155

<211> 447

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-B12

<400> 155

gggtccagaat tcccgggtcg acgggacctc caagatctac atcttcaagg tgctcaagca 60

gggtgcacccg gacatcggca tctcctccaa ggccatgtcc atcatgaact ctttcatcaa 120

cgacatcttc gagaagctcg ccggcgaggc ggccaagctg gccaggtaca acaagaagcc 180

caccatcacg tccagggaaa tccagacctc cgtccgcctc gtcctccccg gcgagctcgc 240

caagcacgcc gtctccgagg gcaccaaggc cgtcaccaag ttcaccagca actagggttc 300

cgtcgcggtg tctctagggt tccgtccccg tgttctcttc tagtagcttt tgtgtcgccg 360

tccgtcgtgc ccatgtgtat cgttataggt aggtagcgcg cctgctttgt aaatcgtgtc 420

aggttgtgat ggacggcctt gatttca 447

<210> 156
 <211> 460
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-B2

<400> 156

acgcctgcag tcacgggtcca gaattcccgg gtcgacggga tgtgggcatc tggatgata 60
 ttgctcatga gacaaccaac cttgagactt ggtgtcttga tatactggat agcattgcat 120
 gcattgcttg tgagttttat ttgaagggtta tatttaaagc tgtagtgatg gatctccttg 180
 gtgagccacc tactgtacag tgccatgtct atgacaagct atgcaacaca agcaatctag 240
 tcaaaatgct gtcgattctt tttgaagttt gttactgaat gaatacctga accaaacggg 300
 catctgcgta tcatttttgt tgtgaatctt ccccttctgc tggaattggg cctgcttcag 360
 ctgggtccaa ccgaagggaa ctgcaccaac agtaccgacg aaagagaact gaagaaagca 420
 gcagcagcag caaagatccc ctggtcatac tctcaatttt 460

<210> 157
 <211> 447
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-B3

<400> 157

gggtcgacgg ggaagatgaa atgaatgttg atactacctc tgatgaggat gcggacatag 60
 atgatgaaat gactagatac caaagttctg attcacatgt tgtggagaag aaatatacat 120
 tgacaaaatg cagcgtgaa cctgagacca ataaaacaaa gcattctagt ttgagttatg 180
 aggagcaacc tgtttcttcg gcaccaataa gagcaagcaa aactgttgct gttccagtta 240
 accccatttc cgtggaacct ccaaattttg gaacacaaa agatgttcat gttgtggaga 300
 agccggacat cacacccatg aatgctaag ttgcctctcc agctattaat gtcaaagaat 360
 taggtcatgg agaagtccaa aaggattcac agcggctctg aacatctgtt tctagttcat 420
 atagcactgc ncatcccaca gaagatg 447

<210> 158
 <211> 451
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-B5

<400> 158

taccgagtcc agaattcccg ggtcgacggg gatagctagt cgtattgaag actatgcttc 60
 tagcaacctc catcttgcag catgtagaag agagtagatg gtaagttcac caagtatcat 120
 cgcatagcat aatcctaccc gatgatcctc ccctcatcac cctgtgagag agtgatcacc 180
 ggttgatatct ggcacttggg aggggtgtgtt ttattaagta tccagttcta attgtcaaaa 240
 ggtgaaggta caactccggg tcatcctgtt acagagggac acggctattc gaatagataa 300
 acttccctgc aggggtgcac cacatttccc aacacgctcg atcccccttg gccggacaca 360
 ccttcttagg tcatgtccgg ccttgggaaga tcaacacgtc gcagccctac ctaggcacaa 420
 tagataggtc agcatgctgg tctaaatcct a 451

<210> 159
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-B7

<400> 159

gtaccgagtc cagaattccc gggtcgacgg gtcgttgatt acctccgtgg gcagatcggc 60
 acttattttg cggaaaagct tctcacaatt gtgagcgata tactttctcca tttcaaagga 120
 aaaggcaagt ctgaatcagt tggaccttca aatagtgaac ttgatcctca cttacataaa 180
 ggcgatgctg cattggagtt cattaaacat atatgtgctg ttcttgctct cgatcagaat 240
 gttcagcatg atattctgag aatgcgaaag aacttgtaa agttgggtccg tgtaaaggaa 300
 tttgctccag aagcacagtt ccaagacccc tgtgcctcat tcattctccc gaacgtgatt 360
 tgcagctatt gcaacgattg ccgggacctt gacctctgcc gcgactcgac gctgcaaggc 420
 cacga 425

<210> 160
 <211> 87

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E2-B8
 <400> 160
 tcactactcc ctatagtgag tcgtattaat ctgatcgcgtagtagatg cgactggata 60
 cggacttgcg tacgaccagg caggaag 87

<210> 161
 <211> 97
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E2-B9
 <400> 161
 cagcactccc tatagtgagt cgtagaactc tcgcgtcggtagtgctg attgggtctaa 60
 ccacatctag ctcgatgacg cttgttgtga tctgccca 97

<210> 162
 <211> 444
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E2-C1
 <400> 162
 ggtccagaat acccgggtcg acgggttccc ttacattct tgcaagttgc atgccttact 60
 ttccgctgct catatagtct ttgcatgctt gcttgaattg tgttaagatt gcttgacttg 120
 tccaaagttg caaaagtctg ccaagaactg aaattgggaa aaggataagt ttttatttgg 180
 tcaagtagtc taatcacccc cccccctcta gacatacttt cgatcctaca agtggtatca 240
 gagctttggg ctacatttgc cttgattttc atacctttta gaagtcatag ccttggtttc 300
 acaacctagg agagtatggc gtctagcaag ggaaattacc accgtagagg tccttacttt 360
 gatggtacta attttgctag ttggaagcat aatatgaaaa tgcatttct tggacataac 420
 cccatcgat gggctattgt gtgt 444

<210> 163
 <211> 418

<212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-C3

<400> 163

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 agaacccgaa cggatgcaag ttttgaaaaa catgcggatg aaaagcagat gatgacatgg 120
 caaaatgcaa cacgcaagaa aatgacatgg caacaacgac gaataaccgg cagacacccg 180
 gcgcacgcga tccggggcgt tacaacactc ctccactaac aagagatctc gtcccgagat 240
 cttaggaccg agacggaagg ggaaaaggaa gaggtgaaac aagaaatcaa gagaagaagc 300
 aaagaatcga gagcactcaa gaagaagaga ggaacgacga gaatcttaaa gtcacggaaa 360
 cagatagact atgaaacaac tccggtttga acgagataag aaacgaataa gactgaaa 418

<210> 164
 <211> 461
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-C5

<400> 164

gtaccgggtcc agaattcccg ggtcgcacggg gttgaagggc tatctaacct ctcatgggtt 60
 gacattgctg ctggagggtg gcattcagcc gcgttaacta aagaaggaga ggtatatgct 120
 tggggaagag gagaacatgg gaggctcggc tttggggatg ataagagcag tcacatgggtg 180
 ccgctaaagg ttcagcttct agcaggagag gatattgttc aggtatcatg tggagggacc 240
 cattcagttg tgctaaccag tgatggccga atattctctt atgggagggg cgatcatggc 300
 cgtctaggcg acggtaggga ggtgactacg ggtcacccaa tggaagtgcc cataaacttg 360
 ccgccaccga agaccagcac cagctccgaa gggctatggc aagcgaacta cgttgcctgt 420
 ggcgagcgc acacactcgc catcgtgaca tggactgata t 461

<210> 165
 <211> 452
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-C6

<400> 165

ggtagcgaac gtaggacaaa tttgctgaga 60
cgaacaaaac cgctatccat tggcaatcaa cgctcgggtgg tcaatcagtg ggagccaaac 120
tggtcatttg tgctgatgca tgtatagcgt ggtctgctat tgctgatgag cccggcctgt 180
gtttctttct ttcgctgtct gtgcgtcgtt ggctttgctc tggagtgggt accagaggat 240
gtcagatgat gatggatgca ccataaagtt ctgccaatc aaatactagg caccttgta 300
ctgcttcatac ttgcacaaaa acttatcccg ttaccttggtg tcaatatttt ttcaccctac 360
caaaactact ttttgcaact tgtagtgttt tttctaaaga agatagtaca atcgtggata 420
aataatgagc caacatgctg agctggcatt tt 452

<210> 166

<211> 449

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-D11

<400> 166

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tggggcacat tccgtggaaa atagggttcc ccagaaacga tgaccctgac gggttacagaa 120
gccgaaagag aaagatggat cgggaagcag atgttggtggc gcggttgga tcggaaatgg 180
atgtgatgaa gaaaaccgtg agtgtactag tagccgaacg agatgcagct cgggagcagc 240
atgaagatca tccagcggat ctgagaagcc agcagcggag aagcagtgtg gcttccacgg 300
aggccccacc ggctgggtgca gatgcaccga cgatcgaaat tactgcaccg gagcctctag 360
tggtcgaaat tactgcaccg gagcctctgg tggtcgaaat tactgcaccg gagcctctc 420
gtaccccgt ggacgatata aaggagatg 449

<210> 167

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-D2

<400> 167

ggtccagaat acccgggtcg acgggctata taaaccgaag gggtgtagtc cataggacaa 60
 cgatcacaac atacaatcat accataggct agcttctagg gtttagcctc tctgatctcg 120
 tggtagatct actcttgtac taccatatac atcaatatta atcaagcagg acgtagggtt 180
 ttacctccat caagagggcc cgaacctggg taaaacatcg tgtccctgc ctctgttac 240
 catccggcct agacgcacag ttcgggaccc cctaccgag atccgccggt ttgacaccg 300
 acaccacca tataccttcc tcaaacagc caccatacct acctattatg gcatttccat 360
 agccattccg agatatattg ccatgcaact ttccaccatt ccgtttgcta tgacacgctt 420
 catcattgtc atattg 436

<210> 168
 <211> 449
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-D7

<400> 168

taccgatcta gaattcccg gtcgacgggt gcataccatt caggtataga gctgatgaaa 60
 cttctggtga tgaacagaaa aaagttgttg aagttctcat gataaactcc caaagcggac 120
 caggtttatt attcccaag gtacttattc tttgaattgt cataccaagt tgttttggaa 180
 cattgcgctg ctggcaacac agattggtat ccaggttagc tccaacgtgt tccttttccc 240
 ggcatttata tatttatgaa tcctctgaga caaattgaga tgcacgcagg aatagtgtgt 300
 atggttgatg cataaatcac ccctacctaa attttgaga gcccaagttt ggccaaggat 360
 taaagggaat ggccaaatga ccatggatcat gcaacaaagt tgtcaatcat ccanagaaag 420
 cccaatagtt tgggtgtacc taattagtc 449

<210> 169
 <211> 439
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-D8

<400> 169

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tctccacatt attctctccg gcggcggcga ctcgactctc ggcgaggggc ggagatgtcc 120
tacctactcc cgcacctgca ctccggctgg gcggtggacc aggccatcct cgccgaggag 180
gagcggctgg tcatgatccg cttcggccac gactgggacg agacgtgcat gcagatggac 240
gaggtgctgt caggggtggc tgagaccata aagaactttg cggatgatcta cctcgtcgac 300
atcacggagg ttcttgactt caacaccatg tacgagctgt atgatccgtc aacggtgatg 360
tttcttcttc cgcaacaagc acatcatgat tgatctcggg acgggaaaca acaacaagat 420
caactgggca atgaaagac 439

<210> 170
<211> 387
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-002-Q1-E2-E11
<400> 170

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aactgcgca cccgagatta agcagctggt tgagtcagtc gcaaagtcac gcggtggagg 120
cgctggaaaa gcagtggatg atggctctga tgtcagccac taatgtagtt agtttcttgt 180
aaatggtata tggctgcttg tcatggtctg atgggttgac gtgcggttga cttgctcaca 240
gatatttctt ttctagtatc atatagtatt gcgtctcttc tgtaactgga tattgcgtgg 300
tgaaaccctt taacattata cgcttcacag tgaatgcaaa tattagccct ttgggggtact 360
gcccgtaaaa aaaaagaagc gatgggg 387

<210> 171
<211> 376
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-002-Q1-E2-E2
<400> 171

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gatgaagacg ccagttcact gctacaaact gacggcgaag gtcgaacacg ccacaggcac 120

aacggacctt atcatcttct ccgatgtggc tgatgaattg gtcagtgtct ctactcaaga 180
 ccttgtcgat aacattgatc atgacgacga gtggtacgcc ctgccagacg aaatcgagga 240
 tcttcttggc tcgacgcaca ccttccaggt ttctgacaag tacgtgaatt ggagcttcac 300
 ggtgacgtcg atcatggacg atgctagcgt cccatcccca gctgcatccg ctaaccaatg 360
 ctcgataac gctgac 376

<210> 172
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-E4

<400> 172

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 ataaaaaat caaataagat tttatttcgg agttttcggg gttttatttg aatttaggaa 120
 aaacgtgctg ttatcaaaat tgcatttagg gcccgagtaa atgttcacct tgtgctggctt 180
 gatttttagaa gcccgtagaa atttattttg gaatttttgg agtccgttta gtatttcttt 240
 ttatttttct tccgagcgga ataataaaaa aaacgaaccg acttcggggc gtacccgagc 300
 gggacaccgc ccggggtagc ctttaaatag cgccgccccg agccgcccc a tncatcagc 360
 cccgcctcga tccgtgcgag tcnacagagc catcaccgtc ggcaccgatg atccccgcg 419

<210> 173
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-E5

<400> 173

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 agatgatcga taatggcggc ggggaagagg ccagacatgg cggcggagaa ggggccggac 120
 atggtggagg agaaggggac ggacacggcg gaggagagaa cgacatggac tccacgcagc 180
 agagtctgct ggtactaagt tcaatcgtgc gggaccctca tgttcaagca ttgcttcgca 240
 aggagacgag tactgagaga gctgcttcta gagaggaggc taagctggag caactagtgg 300

tagattcgaa cactccattg tatgatggtt gcaaacctga tgtgacccgc ttgagtttca 360
cgctccaact cgtgaagacg aaggctaaaa ataatggac cgacactagc ctcatgagc 420
atctc 425

<210> 174
<211> 454
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-E6

<400> 174

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cgacttcggc catatgggtc gggtagcgt tagttagcgt cgtcttcacc atagcccagg 120
cttctcttgc accttgctgg caggctaaca tcttcataa ttggaagcgc cgccgtgctc 180
cttgaagcat atccacaagc tcccccatgc cattcggcag gaagcttgat ggccacaagg 240
cctgagcaat gccctgcac acctgccgag ctgctcgtg tagttgtgag aggtcttgca 300
gtaaatcgcc tgcagacaag ggcattctct tctcagggcg gcccggttaac attcctgcaa 360
gtaaaattct ttcaatatgc ttctcgccg agttgtacta cagttcgtct aggcacttaa 420
cataaaaggc ggtgttgaaa cccttttggt cccc 454

<210> 175
<211> 448
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-E9

<400> 175

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tcgctagcta ggcttagctc gcagtgatcg caccatggcg aagcgaacgt acaggagtta 120
gtatgtgctg ggtgaagtaa tgcggcgacg gcagggccgg cgctgctagc tgctgccggc 180
gcggcagcac gcaggacatg atgcagttaa tggaagaacg aaggggagct acaaccagct 240
aggaagggga gctgcagcca gctaggacat gatgcagtga aggaagacat gcatgcagcg 300
gcagtgaact aaagagctct ggaggcaggc acagaagggg cagcccggcc ggaagaagta 360

aagggcggag ggggaacaaa caagcacgcc ggccgtcgcg tccgtacttg cagccactca 420
ccatggctgc atcgggagtc tggacttg 448

<210> 176
<211> 433
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-002-Q1-E2-F1

<400> 176

gggccagaat acnccgggtcg acggggcctt aaaaccagtg acttataagt catgcctggt 60
tgggtgtcac ctgacttata agtcatctga gcataccttc tcaccttggt tttttatgta 120
aatgttgtgg gactcatgta aaaggggggtg acttataagt ttttaagttgg ggtggagcaa 180
cttatgactt ataagttggg gtgacttata agttactccc tccgttcgga attacttgtc 240
tcggatatgg atgtatctag aactaaaata catgtagata cattcatttc tgcgataagt 300
aattccgaac ggagggagta ggtccggttg acaaaataag tcacttttac acttttcaac 360
ttataagttg gtgacttatt tggaacacaaa cagggcctaa catacactag taacatacac 420
gtatttgtag act 433

<210> 177
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-F10

<400> 177

taccggtcca gaattcccgg gtcgacgtga tggacgacaa ggcggtcatg atatctgagc 60
cggacaggta agcctgggcc acgactgatg ctcgctaacc ttcggtgcct' tctttatcaa 120
cggaatcagg catccttgcg aatggcgatg acactatggt caccacactt atgggatcaa 180
tctcagtgtc agaaccgcg gatttccagt acggtatgtc gctgaggact tccaggttga 240
cggttgctag ttccaagaca tttgagtttc acatccacga ttgggcgatc accaggtacg 300
cgataagtgc gacatgctac cgtaagggtg atcatgtggc taataccagc atggctctac 360

cctcagatga ttaacgctac acccacgagt ctttccgagt atcttattgt agcacgacca 420
actgggcgac 430

<210> 178
<211> 436
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-F4

<400> 178

ggtccagaat acccggtcg acgaattcca tggatatgtc cggatcttct tcaagtccgg 60
ggtcgagagc tcggccggga tcctctggct gcggagaggg gctggtgaac tctttcacag 120
cctttcttag ttctgtttt ttaaacagca aggtaaataa ttgtgggtcaa gaaggtaagg 180
acgagtagag tcgaataaca aataacaatt taccagctt cgggggttgt acatggcaaa 240
tccatcctgc ggtttaatgt ggaggaactc ctcttcttct cccttgatac attcagatag 300
taccctcgc aaagatgtgg cggagtctgg acctttgcga ccgcagcggg aggcacgtc 360
ttatccattg aagtgccaca tgggtttccc ttagattgaa gtggttgac tccccctata 420
atacatattg acatga 436

<210> 179
<211> 403
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-F5

<400> 179

taccgatcca gaattcccgg tgcgacatga tctactcaca tgtcttcgag gcgttcacc 60
agatcaattt ccactagcgc aaggtcaaca catgcagcag aaaatgaggt gtcaccggtg 120
gccatgacgc agtgggtggg ttggtgatga catccgcctt gccgaactcg tgggtcttgg 180
ctcgttgcat cggaatggaa acctttgaga ggatccctcc gcgctggtec ttgcctcctt 240
agcaciaaagg aggaaattgt tcctctatg ccattgggtg ccgcctggc cttgggttatc 300
atgactcacg tcacgtgag cctcgtgagg cggggtacc gcatagaagt cttactcct 360
cggtaggcag tctcggggaa ccactcctcg tgaggtcttg gcg 403

<210> 180
 <211> 452
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E2-F7

 <400> 180

 ggtaccgatc cagaattcgc gggtcgacgg gataaaaata tgatagattg gataaataga 60
 tctcgaataa aagcaaatta aaataaagtg cagcaaggta tttttgtatt tttggattaa 120
 tatatccgaa aataaaagaa aataaaaaata gatcgcaaag acaaatataa taaagaagag 180
 accccaggcc cgtagatttc actagtggct tctctcgaga aaaatatcaa acggtgggta 240
 aatgaattac tgttgggcaa ttgatagaac ttcaaataat catgacgata tccaggcaat 300
 catcattata taggcatcac gtccaagatt agtagaccga ctcttgcta catctacttc 360
 tattactcca cacatcgcca gctatccagc atgcatttag tgtattaagt tcatggagaa 420
 acagagtgat gcaaaaagaa caatgacatg at 452

<210> 181
 <211> 432
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-F8

 <400> 181

 gtaccagtcc agaattcccg ggtcgacggg cgccttgcca ccaaaatccc agccgagaag 60
 aggaagatgg atgccaggaa gaagagcctg aagaggctgt aacagcgcac cccgccggga 120
 tagcgtcgaa gtgtggctgt tgtagtagtt aggagattca atcccctacc cttgataagc 180
 gacgccagat tcagcagggtg cacagtggga ccgaatgaat aaataaaccc aagggacatc 240
 tgatgaatct ggtggttgat tggtagaagt atgcctgtag tcagaactgt agtgatgtga 300
 gatgagatgc atgtgagttg caccctgtt ggaataaact ctagtgatgt gcaatgacga 360
 actatttgga agaacaaact gtcgcctttt cagaaaaaan aaagannngc aaaaaaaaaa 420
 aaagcggccg ct 432

<210> 182
 <211> 429
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-G6

<400> 182

aattccccggg tcgacgggac atgatcacga cggatgatgct gtacacagtc atcatgtaga 60
 agatgccgga catgatgatg aggaagatgc gggagcagac gaagggcatg atcatgaaga 120
 tgaagatgcc ggcggagcag acgacgatgg accatcgatg ggctgggtgc aggaccctca 180
 tattcaagag ctgcttctca agcagacgga taacgcaaga gctgccgccc gagagaaagc 240
 caagctagat caactggaga tagacgcggt tactccattg tatgaaggat gcaggccgga 300
 ggatacccg c tcaaagtaa cgctcatggc tctggagatg aaggtaaaac aaaaaatgac 360
 cgacgcatgc ttcgacgaga acatgtcatt ctggcacgaa cgtcttccca aggggaacaa 420
 gtgcccgcac 429

<210> 183
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-G7

<400> 183

taccgatcca gaattcgcg gtcgacgggg aagaagcaca aggcggagaa gcgggcgccc 60
 gcgtccaagg aggccggcgg cgaggggaag cagcggggca ggaagaaggg cagcaaggcc 120
 aagaagggcg tggagacgta caagatctac atcttcaagg tgctcaagca ggtgcacccc 180
 gacgtgggca tctcctccaa ggccatgtcc atcatgaact ccttcatcaa cgacatcttc 240
 gagaagctcg ccggcgagtc cgccaagctg gcgaggtaca acaagaagcc caccatcacg 300
 tcccgggaga tccagacctc cgtccgcctc gtcctccccg gcgagctcgc caagcacgcc 360
 gtctccgagg gcaccaaggc cgtcaccaag ttcacctcat cctaggcttc atcgctcgtc 420
 ttttaacgaa tcgatgatga tgttct 446

<210> 184
 <211> 345

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E2-G8

 <400> 184

 aattcccggtg tcgacggggg cgaggacggt gatgaggggtg atgagtacta gagcagatga 60
 gtttgcgacc tgatgtacgt caagcgctcc ttcgtctact actatcctgt gatctgcccc 120
 agcggcttta tctgttgtct gtctgtttga atgtttgctg tgtgggtgtt ggtttacaac 180
 ctgttggtgc gtatgaacct gtggtatgtt tgaacctgct tcgcaccttg gtcaatatgc 240
 atgttatctg gtttgccctac aataaataaa aaacccaaaa aacacatcaa ggaaaatcta 300
 gaactcagtc cggcacatc aaaaaaaaaa gcggccgctc tagag 345

<210> 185
 <211> 425
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E2-H1

 <400> 185

 ggggtcgacgg gatggtaaaa gttgtgtgac aaatttggtg catgaggtgc tcttttaatt 60
 gccttcctta tgtgtgaagg tcgggatcgc acgatggta actcctacca acccttcccc 120
 taggagcatg tgtagtagta ctttgcttcg agggcaagta gacttttgca ataagtatat 180
 gagttattta tgactaatgt gagtccatgg atatacgcac actcatcctt ccactttgct 240
 agcctctatt ataccgcgca actttcgccg gtatcatgca cccattattt accttctca 300
 aaacagtcac catacctacc tattatgaca tttccatagc cattccgaga tatattgcca 360
 tgcaactttc caccgttcca tttattatgg cacacttcat cattgtcata ttgctctttg 420
 catga 425

<210> 186
 <211> 458
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-H10

<400> 186

tgccggtcca gaattcccgg gtcgacggga ccgttacaca tgatgatttt gatgaatata 60

atatgcatgt gcttgatgct cctacttgca attattatga gagaggaact atatctccac 120

ctctctatgc ttcccacatg ataaaattgc aagaaactgt ttatactatg cattggcctt 180

tactttgtgt gcatgaattg ttcttttatg acatgctgat gcatangaag agagttagac 240

tttggtgttg catgatatat gttactttgt gtcactact aaattacaaa tcattgttaa 300

ttaaaattgg ctttgatata ccttgggatc cgggtggatt cactacttga gcactatatg 360

cctagcttaa tggttttaag gaaagcgtg ccagggagac aaccgggaag ttttagagag 420

tcatttattt ctgttgagtg ctttcatata atttaaaa 458

<210> 187

<211> 448

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-002-Q1-E2-H12

<400> 187

taccggtcca gaattcccgg gtcgacgggc gacggtgaga ggcgcccaca tcaacctcaa 60

ggtcaagggg cangatggca atgaggtttt cttccgcac aagagatcca cacagctgaa 120

gaagctgatg aacgcttact gcgaccgtca gtctgtggat ctcaactcca ttgctttcct 180

ttttgatggc cgtaggctcc gtggtgagca gaccctgat gagcttgaga tggaggaagg 240

cgacgagatc gacgccatgc ttcaccagac cggaggggtgc tttcctggcc cttagaagga 300

gcttgctgca gcctggctgt tctatgtcgt atgctacctt tagaactaga gtaaaatgta 360

agaagtgaag gaacttgatg ggctatgggt ctgtgccata gcctgagggg gggctctggag 420

gtgaaacaac atcggagtac tggtgatg 448

<210> 188

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-H2

<400> 188

cgggtcgacc ggatggtaaa agttgtgtga caaatttggt gcatgaggtg ctcttttaat 60
 tgccttcctt atgtgtgaag gtcgggatcg cacgatgggt aactcctacc aacccttccc 120
 ctaggagcat gtgtagtagt actttgcttc gagggcaagt agacttttgc aataagtata 180
 tgagttatth atgactaatg tgagtccatg gatatacgca cactcctcct tccactttgc 240
 tagcctctat tataccgcgc aactttcgcc ggtatcatgc acccattatt taccttcctc 300
 aaaacagtca ccatacctac ctattatgac atttccatag ccattccgag atatattgcc 360
 atgcaacttt ccaccgttcc atttattatg gcacacttca tcattgtc 408

<210> 189
 <211> 409
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-H3

<400> 189

cgggtcgacg ggcaagctca caccaatgag gttagcaagg gcaaaccact agattggggt 60
 tcaggacaac cagtcacaga tgagcatgga cgccttcaga ttataaagaa tgatgacctc 120
 gaagagctcc aagaactcgg ttctggaact tttggaactg tatatcatgg gaaatggagg 180
 ggctctgatg ttgcaataaa aagaatcaat gacagatgtt ttgctgggaa gccatctgag 240
 caagaaaaaa tgcggaatga cttctggaat gaagcatcta accttgctga tctgcaccac 300
 cccaatgttg tggcctttta tggcgttggt ctagatgggc ctgggggatc cattgcaacg 360
 gttacagaat acatgggttaa tggctcactt angacggctt tgctgaaga 409

<210> 190
 <211> 447
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-H5

<400> 190

ggtaccgatc cagaattccc gggtcgacgg gtcaacctca atcccgatga tgtggtggcc 60
 aggctcgagc gcatccttgg cagatttgac atccccgacg aagtcgaaca tcaccaacgt 120

gatattttga ggatgcaggt gatcgatgga atttgcttcc aggccagaga catggaaatg 180
gagtgggttcc gcggagttgg catgcgcgcg attgcacgct gtcaagctct tctggaagaa 240
gcccacagc cccaagagcc tcccagcgc agcagctccg taggcggagg cgggtcggga 300
cacttgaggt gaatggcgc aagggtgcta tgctgatcat ggagtgcgag aagaccatcg 360
tcggaaggcc gccagctcag ccttttagct tatatttttag tataattgta tgcataatgta 420
ggctgtgagt gttctgggccc ttgccgc 447

<210> 191
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-H7

<400> 191

gtaccgatcc agaattcccg ggctgacgcc tcgcccctcc ttgtcacca attctcatct 60
gcggagccgc ctaaagagaa cgagcggccg ctccggccac cggctagatc tgcagcacca 120
tcactccacc agcccacccc cgtgatctac ctgctgtcgc cggccctctc tccctctgca 180
gcaccaccaa ctgaggtgga gttcaacagc tcacattcct acatctttgg aaatgcatcc 240
ccatctaacc ctacacaggc atcctatgtg tgctgagatt attgaagaat tccagaagtg 300
ccatgtggat caccatca aaaaattctt tggatgaatgc acggatctta agattaagct 360
tgatcgatgc ttccggcagg agaaagctgt gaagagaaag gcaaactttg gagaga 416

<210> 192
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-H8

<400> 192

aattgccggg tcgacgggat ggaggacatc gtggagccca agccgacatc acaaccagag 60
ccttttagcag gtgaggacca acttttagtca ggataagtgt actagatatt ccccttcaaa 120
atggccaatt gttggcgccc ttcccgtca atatttgga ggaggcccag ggcctttgcc 180
tacaaatagg gctagccacc acaagataga aacaaggga tcctcaccag gaaccagta 240

gagagagcga ctgaactccc cctagtagtt catcgacta gtcaaaaata gaccctcgcc 300
 aggctgttct tccttgatt gttcatcatc agccaagag gcaatccatc actacacaca 360
 ctagagtagg gtattacacc acaatggtgg cgcgaactag tataaactct gtgtctcttg 420
 tgctgtt 427

<210> 193
 <211> 335
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-003-Q1-E1-B9

<400> 193

cgggccagac ttcgcggggtc gacgactagg atgcagccaa ggaacgggtga tctgtgttga 60
 atattccccc aaaggggaacc cttattcaca taaccgttac taagggtgaac tttaccggaa 120
 ccaaccttat ccaattccaa aaaggaattt tccaagggtt catccacccc aatgacaaat 180
 gcacgttttt cagggaggta tcanaccagc caatatatta ataggggata acctttgtcc 240
 taaaatctat gacttcggtc tctcccagat gttttaagaa gaagaaacgg aacgtattgt 300
 tgaaaatgtc gccggaacat tcggatatat ggcac 335

<210> 194
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A2

<400> 194

attcctaggt cgacgggaca gtcttttcga aaattgtttt agaagtggg gaggggaaaa 60
 tgagaggcga atggcaaata atgtaatgcg agagatgaga gtttatgatg ggtacttgg 120
 atgtctcggc ttggcgtaaa tctccccggc aacggcgcca gaaattcttc ctgctacctc 180
 ttgaacttgc gttgggtttt cctttgaaga ggaaaagggtg atacagcaaa gtagagtaag 240
 tatttccctc atcttttgat aaccaaggta tcaatccagt aggagacaac gcgcaagtca 300
 ccgaatacct gcacaaacaa acaccaactt gcaccaaca cgataaagggt gttgtcaatc 360
 cgttcattgt tatttgcaaa gtgagatctg atagagatgg ataaacggta aagtaatatt 420

tttggat

427

<210> 195
<211> 419
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A3

<400> 195

ctcccggtc gacggaagg catgatgtga tctaatacga gctatcgct caccggcagc 60
catctgcata gcatgcctct ctgtaggcat ggctctccc aagaacaaga agcggcgat 120
cttagcacgc cctcgcttga attgcaccgc ggcttggtgc atggtcaggc tatcgttgat 180
cttgtgtggg taaagtgtga agactgggcg cactgacggc cccatcgga cctgaacgat 240
gaacgagaag agcttgacga acccctcaag cacgttggcg aacatctgtg attcacagtc 300
gttgccagcc atctacaaa gtaggcaaaa attctaaacg atcagatcat aaattttatg 360
ctgactgtca gaaaaatgac tacatttga aaaacatgaa taaactctat catgcta 419

<210> 196
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A5

<400> 196

tcccggtcg acggaaggc atgttgtgat atgatatggt caagacgtga taagatataa 60
attgttgtat gagatgatca tgttttgtaa aagttatag cactagcag gacgcttatg 120
gttgctgctt tattgtatga aatgcaatcg ccatgtaatt gctttacttt atcactaagt 180
ggtagcgata gtcgtataag caatagttgg cgagacgaca acgacgttac gatggagatc 240
aagggtgtcaa gccggtgacg atggagatca tgacggtgct ttggagatgg acgtcaatgg 300
cacaacatta tgatggctat atcatgtcac atagtttgat tgcactctag atttatctat 360
tatgcacttt attttgctta gtatctgtca cagcactata ataatacatg taattagtgg 420
catttcaccc 430

<210> 197
 <211> 448
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A6

<400> 197

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 gctgcttcaa gttctgaagg tcgcctgttc ctgcgtgctt tctgctccaa aggaaagacc 120
 tacaatgttt gaagtgtacc agcttctgag ggctgttggg gagaaatacc attttagcgc 180
 cgctgatgat gaactggcgc tccgaccaca ggatgcagac tctaagaagc tggatgagct 240
 tattgtggcg aaatagacgg gtctgtctgg tacgttgatg ctgggtgttt gttgtatctt 300
 gtgaatggc aggttgagat ggtagtaatg tactactact atctggactc ctctgctagc 360
 tagcgaaacc atcggaagct caatcaatgt tcatggtcct ggaaatagca tgttggtgta 420
 agatgtgtat gacttgtgag ttccacgt 448

<210> 198
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A8

<400> 198

gggccagaat tccccgggtcg acgggggatgg gggaggccgt tggagaggct cggagcgcgc 60
 cacgtcgccg ggcagggaag gtcagtgttt tttgagtttc accggaccgg caaaacctct 120
 cgggacgagt gcttcgcccc ggcgtgcgat tggacacgag gccgcccgtc tcctgttttc 180
 gtccaaagga gaagaaacaa caaattacgc cctgcctctg attgtgaccg gggatgcatg 240
 aaactatcaa catctctttc tttctttttt ttgtcttttg aaatgatcaa catctcactt 300
 ttgacatgtt caaaaaaaaa acatctcact tttgacacgt tgtgagctat atcaccagtc 360
 ctgagttgaa aaacaaggag aacttgcagg taggaatatg gatgataatt tttgactcaa 420
 gtgatatttg caccgggt 438

<210> 199
 <211> 423

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-004-Q1-E1-B10

 <400> 199

 ggtcctacat tcccgggtcg acgggtagtg aaaaggtggt gcatgcaaca gagttaacga 60
 gtaggcatgt ttagatgctc tatgcactca ctacagatca tgtcatgaca aacgagtcac 120
 acacgcatca agagtacata ccataaaagt tacatatggc actaatcata acatagcatg 180
 cacggctgaa taggagcatc ctcggaacaa tcgctaaaca tgtcaacatt ctgccaggaa 240
 cattttatag cgacacgtac agctcgattg acacaagtta tgggtgctcta tagctgcaaa 300
 cagatacatg tacggataga tgaacacaat attgacagtg cattattact gatcaacatc 360
 agcagatgca cgggtcacga tgatacaaca tgaacatatg gcatcgggtc ggatagttag 420
 gtt 423

<210> 200
 <211> 448
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-004-Q1-E1-B11

 <400> 200

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 cgtggttgct cgcggcatcg gcgaggacga cctcctcgag gggtttcgca gccaggtaa 120
 gtcagaaaga aatattccat cctcggacaa acttctcttg ttgcaatgga atccaagttc 180
 tttcggttcc tgaagcttgt cggagttggt ttcaaagcaa ggacagagca aggaggccgc 240
 gagttgtttc tgaaactagg ctacagccat gaggtgcagt tcaccgctcc acccgccgtc 300
 cgcgtcttct gttcaaacc caacataata tgctgcactg gcattgacaa gcatagagtg 360
 caccattttg ccggagccgt ccgaagcagt aaacctccgg aagtgtacaa ggggaanggc 420
 atactgtaca ttgatgaggt cataaagc 448

<210> 201
 <211> 399
 <212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-004-Q1-E1-B2

<400> 201

attccagggt cgacgggttg gtcattgttc atattcgtca cacaagaatg ctctcatcat 60

gcacaacccc gaagacaagc caagccattg tttcatactt tagtaatctc tatctttttt 120

tcaattttca cgcaatacat gagcgtgagc catggatata gcactatggg tggaatagaa 180

tataatgatg gggggtttgt ggagaagaca aagaaggaga aagtctcaca tcgatgcggg 240

taatcaatgg gctagggaga tgaccatcaa ttgatgtcca tgcaaggagt agggattgcc 300

atgcaacgga tgcactagag ctataaatgt atgaaagctc aacaaaagca actaagtggg 360

tgtgcatcca acttcottgc tcccgaagac ctagggaat 399

<210> 202

<211> 451

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-004-Q1-E1-B5

<400> 202

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ttatcatcta agccgtcaaa ctggagctct aaatcgcata attgaccgag gcagtcgtgc 120

cataaattac attcttacag tgatgggtgtt caatgttgtt cccacaatac tagagattgg 180

tatgggtgtca agtatacttg cgtaccagtt tggttccact tttgcttgga ttacttcagt 240

ttcagttgct acctacattg ttttcacttt ggctatcaca cagtggcgga ctcagttcag 300

gacagccatg aacaaagctg ataatgcttc tagtacagtg gcagttgact ccctgctcaa 360

ttatgagact gttaaatact tcaacaatga gcaatttgaa gttcagaagt atgataaata 420

cttaaagagt tacgacgatg ctgcactgaa a 451

<210> 203

<211> 437

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-004-Q1-E1-B7

<400> 203

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gaggtctcta aataagggtt ggtggttggc ccaccagta gtggctgaaa gagacgttaa 120
tcgatcatct atgggcgata atactacacg catggacaaa agccgaaatc actaaaaaaaa 180
tttaagcatc agtacatacg caggcgctca tatacacgcg catacactca cccctatgaa 240
cgcacacacg cacaccctac ccttatgagc acctccgaga gactgagccg gcatatcatc 300
ttgagattta cgaagccacc gtagacgct catcatcgac gagaacgtct cctcccactg 360
aaagcgcac gccggaaatc ctgaaataaa tccaggaata atgcgagcac caggatttga 420
aacctggtg ggttggg 437

<210> 204

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-B8

<400> 204

gggccaggat tcccgggtcg acgggggcca tgacaaaagc gacggccgga gctcgggtgt 60
tgccgctgag agggctagag ctccggggcg aggaagctga gcagcgcagc ggcattctaca 120
tagcacgttg aagaagtctg cgaggtcggc ttggtcattc gggcttgcta gcgatggcag 180
tgacaagagc gacggcgaga agccctcggc catggcgggg ctacggcgta gagggcgggc 240
gcgaccatgg gagaaggggg agatgatgag ggtgctcaca acgcgtccga tggcgctcgc 300
ggcgatgtcg gggcggtcg ggttgctgag aatcgacaac gacggctgct ggtggagagg 360
acgaagacaa cagcgatgga agcactactg ggcgctccgg catcgtttgt ctccgc 416

<210> 205

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C6

<400> 205

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tgggggtcaag agtggcgctg atgggtgaagg taccaccagc gccatcctcc ttggcagaca 120
 ctttcttagt cgcaggtgga gctgccatcg ctttcttgca cttgccggtg gagctcgatg 180
 gtgcgctctc gacggtagcg cagcactccg aagaggtgca cttgccggag tgggcatcag 240
 agctcttgcc ggacttggtc ttcttcttc ccccgggagc ttcagcggca agtgtcttg 300
 gctctgctgc ggctgctgct tcccggtaga tcttgctggc acagataaga gcatecttct 360
 tgtctccagg gacagagatg acacttattg ggcctggcat tttcagtatg ttgtatgcat 420
 actgagaggc tgc 433

<210> 206
 <211> 448
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C8

<400> 206

cgggtccagaa ttcccgggtc gacgggcact tcaatgtttt ttaaacttat ttgaactccg 60
 gacttctttt gtgttcagta tgcagcattc aaagcgacgt catcaatttc caacatgttc 120
 tgacatcatt tgttggtttt tcagtcattt acctaattgt ttagagagct aaatgaccgt 180
 gaaattgaaa atcactacaa aatgaactgt gaaaatgttg aaacctggca tggatatcatc 240
 atttcacccg catagcatgt gcgaaagagt agagagggtc acggcaaaaa ctggacgcac 300
 ttcgtgtaca aactggacaa tctctttcgg agtatcaggg ttttggatca gaacttatct 360
 gttacacggg cacttcaatg ttttttaaac ttatttgaac tccggacttc ttttgtgttc 420
 agtatgcagc attcaaagcg acgtcatc 448

<210> 207
 <211> 447
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-D10

<400> 207

ggctctgcat tcccgggtcg accggttggt cgggttgggt ggcctcagtg ttagtaccac 60
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ccatgcttgg ccttggctct tggattctcc atggctgtct cggttgtgcc ttgtgtccaa 180
 tgggtgtatat tcgaggtctc gtcatatgtc ctcttggggc ttggagagta gtacgagtgt 240
 acatggggat gaacgtggga tgctccacat caatcccatc ctccgaggac tttgagttaa 300
 aatcatcaag tgaggaaaac ccaaatccca aaccattca cctacgaacc caaagtgatt 360
 gagcatcact taagagattg ttcctgtgtg gaaccgacgc ttgttaactt tgagaactgt 420
 gtatcctcca gaccgttagg catcatg 447

<210> 208
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-D3

<400> 208
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 ccgctacact tcatctctaa ccttccactt gggtaaccaa cgagggggcga gaagccatca 120
 gcattcgacg ctgccgcatt ctaccgagct caagagggca gctcggtaga gagtgtgttc 180
 tgggtctcaat attctaaggc cggacaccct atgcccttaa gcgatcagct gaagcagctg 240
 gtcgagctcc acaaggcggc cgaacaggcc gtaaattgtc ttctagtctg gctgtggcct 300
 gtggaggccg tgcttgggag ctacttcggg cttgtgcggc cgctgggtgga ggctgtcca 360
 cggcttgagg tcatcaagcg ctctacctgc atcgagggtg cccggagggg cct 413

<210> 209
 <211> 433
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-D5

<400> 209
 cgggtcaagga ctccgggtcg acgggtctgt caaatgcaga gccgtacgta tttcgcaaat 60
 attctatgtc cacaatgctt tgcacggagc tagtctagct aattgctcca actttcacta 120
 tgtaaccaga ttgagactta gagtcatctg gattgggtgta aaagcttgca tcattgtaac 180
 tgtttacgac gggctctttt atcacctcca taatcgagaa acatctcctt agtcctcact 240

aaggatattc ttgacccatg tccagtgatc cacttattat atcaaaattg tattcctttg 300
 ccaaatacag agcacggtct acaatacgtc aggttcacag catagcatac tttagagaac 360
 ctatgactga gggatatgac agaagagatg ttgtaccagg ttatgagcgg gcgctccaaa 420
 ggatccaaac tta 433

<210> 210
 <211> 396
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-004-Q1-E1-D8
 <400> 210

gggtcgacgg ggaagtcgac cgccaaggag ggcggcgaca agaagggcaa gaagaacgcc 60
 aagaagagcg tggagacgta caagatctac atcttcaagg tgctgaagca ggtgcacccc 120
 gacatcgga tctcctccaa ggccatgtcc atcatgaaac tccttcatca aggacatctt 180
 caaaaagctc cccggcaagg ccgccaagct ggcgcggtac accaggaagc cagccatcac 240
 gtcccgggag atccagacct ccgtcggcct cgtcttcccc ggcaacctcg caaagcacgc 300
 cgtctccgac ggcaccaagg ctgtcaccaa gttcacctcc tcttacgctg ttcgtcttcc 360
 tgtgtctcgt agttagctgt tcgggtgtgt atgtgg 396

<210> 211
 <211> 469
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-004-Q1-E1-E10
 <400> 211

ccggtccagg attcccgggt cgacgggagg tgtgagagag tagaggaatg gcctggccaa 60
 caatgaagta gggtagggcg gtgcggcctg tgcggcagca cagccggcca tgggaggcgg 120
 gagcaggcag tcccaccgga gctggtttgg gcggctggag taagaagatc agatattgaa 180
 gaagcagcac atccgttaga ttaacatcca acggtcactg ctgctagaat cgtttatgga 240
 ctaagttgac aaagccaaag tacacgtcaa cctagtagac ccacaagtca gcctccaaat 300
 ctgtcccaaa cagcatacaa ccgaaaattt ctaaccagat tcaaattaat tttaaatcta 360

aatatacctt aatttaaatt caatgaaact taccgcgaca aaaacaatga aatttaaaat 420
atcaaaatcc gaaagaaaac agtatttttg aactaattgc ctaattggt 469

<210> 212
<211> 461
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-E11

<400> 212

ctccccgggtc gacagaacgt gatataatct tggcctttca tcgatgactt aatatcaata 60
ggaaggcccg tactcatctt tgaccaaata agtgcctggt taatacacgt taaactaact 120
ggaatttgtg cagtgcatt caattagaca gaacaggcaa caaagagtat taactcctaa 180
ctgcaaacat gttcataact acagagtaac agaataagat aatcatctat cagaatatcc 240
attacagggtc caatgttcaa agtctgctta ccgcagctag ttactcttac tcaactgagg 300
caaaatgtca cacacattct gtatgcatgg gacagcttaa ccatcagaac acaaagttta 360
caagcgtaga acataattgt acatgtctca ctattgaaga ttaaacacaa atttagtgag 420
aaaataggac aaccgttata actaaaatgt tgattttctt t 461

<210> 213
<211> 321
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-004-Q1-E1-E12

<400> 213

ttccccgggtc gacgggttca cttatattat tttgagagtc tttgagaaca acatgggtatt 60
tgctatggtt atgaatatgg tcctagaatg atgagcatcc aagttgtgta taataaaaac 120
tatcatagaa agtgcacaa acattaggat caatttgatg tttgataatt gttttgagat 180
ataaatgtag taatgttaga gtcatactag tgggtaacta tgaaattgag aaatacttgt 240
gttgaagttg gcaagtccca tagcatgcac gtatggtaaa gttgtgtgac anatttgctg 300
catgaggtga tcttttgagt g 321

<210> 214
 <211> 411
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-004-Q1-E1-E5

 <400> 214

 cgggtccagag attccccgggt cgacgggcaa tgggagtgag cagatgtgat ctgttggtgg 60
 tggctagggt taggagacac cgcacactta tataggcgca gccgcgtgga gagacgtggg 120
 cggcccacgt ccgagtcctg gacagcccac gatccgacgt ctcagattgt ggcccagctg 180
 tcaaaaactc tccgttagtg actggcmeta aaataagcac gtatgtgtga gctcggctcg 240
 ctcatcccg caaccgcag cgtgacgcgc ggcggaggag gagtgcgcga gggccttttc 300
 tattctcaag cccaatagc atgtgaaaga caatccttct ccactagcgg ggtgagacta 360
 aacttccgc tacacctagt gccataaac ccacatgggc tagatttttc a 411

<210> 215
 <211> 445
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-004-Q1-E1-E8

 <400> 215

 cgggtccagaa ttccccgggtc gacgggaagc actacgatcc ggtaagactt tcctgaaatc 60
 tggcatgaca cgtcagggtca gtacattgaa tggacttcca aactcacaac aagtaaaagc 120
 ataatggcaa acaataacat gacaattaag caagttaa at gcaaggctat aatatactac 180
 tcatgaagtg atcatgcttg tgcaatgagt cctcggact cccttaccat acggggttacc 240
 tcgtaaccaa catcatcaat atggtgatca cctccggatc acgaacgaaa ccaacccttg 300
 ggttccaaca tcaaccatct tcacggtttc aacattatca tcgcataatc agtgtcatct 360
 gtatgacctt attgtgcaa attaacttat tgttggtgat ccatggtgtg acctactacg 420
 aactgtgtcc gtaaccgtgg acgcg 445

<210> 216
 <211> 429
 <212> DNA
 <213> *Triticum aestivum*

<223> Clone ID: LIB103-004-Q1-E1-E9

<400> 216

ggtccagaat tcccgggtcg acgggagaag ttttcaactcc gactccgaag atactcaaga 60
tgaaggtgtt gccagtctag cacttgtgtc aaccaactcc tacgacatat ttgactcacc 120
aatgaagga attggaagat gcttcatggc caaaggctct aaggtaacac accccgagta 180
tggtgatttc aatagtgatg aagatgactt gttaggtgat gatttgcttg gtgacaactc 240
tagtgatgaa tactatgatg aaagaccaat taatcatgct aaaacgagtg acaatgataa 300
tgagaagatt gaggtctctaa ctaaagaact taaaactctt aagttagctc atgacactat 360
cttcgaagat catcgagaac ttttaagagc tcatgagaaa ctacgctttg aaaagctcaa 420
tcttgagca 429

<210> 217

<211> 463

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-F10

<400> 217

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ccaagactgc cccaagggtt gctgctgctc aagcctctaa gctaacagca ccaagagat 120
caactagaaa cataccagca gctgagaaga acaaggccca gtgccttaaa tggaagaaga 180
agaagagccc caagtgtca gaaaactcaa actaaagatt cctgatgatg atgacaatca 240
tccagttgtt gataatatga agaaaagaaa acatgtagga ctcatattgt ggagacactc 300
agaccctat gctctgagaa gaaggactat tgtggactac atgtttcaca ctaaggaaca 360
acaggacttc tatgagattg tgctcttgga caagaagccc attgtgtgtg acatgaaatg 420
ggtggactgg aaatacattg aaaacaatga agatcacttt cct 463

<210> 218

<211> 447

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-004-Q1-E1-F12

<400> 218

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ctagtgcagc cgcttggtcg tgctgaagat gaagagcatt ccagtgcatt tgagccggaa 120
gaaaatggtg atggtgctga ggatgaggag attgaggatg atgatgctga ggatggtgag 180
gattctgtca agccgcaatc ctcatcgaag aggaagaggt ctggtgggga ggatgaagat 240
gatgatgacg gtgatgatga tggatgatgat gatgagaagc ctccatcaaa gcgatagtca 300
atttgttctt gctgattcgg gtacctttct gcttgggcca ngaaaggaaa taatcctctg 360
ggagaagatt gttggtaaat gctgtagctt taggacatct gtggtagggtg tagcagctcg 420
aacttgagtc taccatggt agttgtt 447

<210> 219

<211> 445

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-004-Q1-E1-F5

<400> 219

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cgccagcttg gctccccgac gtgctctgcc ctgatccacc aaagactggg cattggcacc 120
attgcgcgtt gggatcatgtc cacgggggttg gttacgatgt tggttcagtac ttgaaaccgc 180
tggcgagtcg atgtgcctgc tgtaactccg gcttggacga ggggttgagt gaatccactc 240
acgactataa gaataagccg cttgctgctc caatgctgtt tgaagaagct ctctggccct 300
ccgcgtttca accgccgatg gagactcgcc ttcaagtggg agagccgcca atcgtatcgc 360
cgcaacaatc atattgtcca aagggttgga ataatgactc gacggcgtca aaaactgctg 420
aggcgngta ttattcacac gcgga 445

<210> 220

<211> 440

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-F6

<400> 220

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agttctattc ttcattatgg acatacgggt gctccaaatg accggacgct gaatgatgga 120
gacatggctc taatggacat gggagctgaa tataatttct atggctctga catcacatgt 180
tcatacccca taaatgggaa gttcaacagc aaccaggcaa tagtatataa tgctgtcctt 240
aaggctcata atgctgtcat atcacacatg cagcctggat taaaatgggt tgatatgcac 300
aagctggccg agcagacaat acttgaatct ctcaagaatg aaaagattat ccatgggtgat 360
attgctgata tgatggctcg aaggttgggt gctgtttcca tgcctcatgg tcttgggcac 420
ttgcttggaA tcgacacca 440

<210> 221

<211> 405

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-F7

<400> 221

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ggtgaggatc tccatctgaa ctatataact caaaaagtct acatgttaga gcaacgctag 120
cacagttact gtgtgcctc ctccattata agcgtcgata tgggggttgg gtagcgaaaa 180
tgcagcctaa ccaaatcgtc aaaacaatcg cgcgtgccat acatttttga gcacctcca 240
tatttgctc tcaagcctt gtatttgag ttttcggggc ctcttttga gcacctcag 300
tccacgaaaa aagtgcgcga tgaaaatttc aggatgctcc aacccccatg gccacccgcg 360
ctggacgtgg aacatcacag taagagcttc gcctcaaccc atgcc 405

<210> 222

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-F8

<400> 222

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cagcccagat gatgacctgg ttgtccagct ggcccttgg cacctccgcc accttgacga 120
 gggcagcggt catgctcttc atctccctct ggagggactc aacgtcctcc ttgacgcctt 180
 tctgcagctt gtactcacc accagcagct cgcagagctt ggggagcaag cttcccatgg 240
 caccggtcac cactccatg gtggaaccgg tggatcttcg ttctcagtgt atggatcctt 300
 tagctaggaa gcagtgtgt aacacacaag gattggaagt tagaaaagca aaggaaattg 360
 ttctctatcg catgaaatac acaggataag aaatgcatcc actccaacac caaggaaaaa 420
 tagctgctt 429

<210> 223
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-F9

<400> 223

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 atatcagttc tttatgacta atgtgagtc atggattata cgcactctta cttttctgca 120
 attttctagc ctcttcggtg tcgtgcattt cccttctca cttgagagc cagtgcgaac 180
 ttcactggtg catccaaacc ccgtgatagg atatgctcta tcacccatag gccttattat 240
 aacttctca aagcaaccac gatatctacc tattatggcc tttccatagc cattccgaga 300
 tatactgcca tgcaacttcc aacgcttctt tatgatggac ttagaattca ttggcaatat 360
 gacttgcag atcatatagc tgacaaagta cttgtggctc agtcactgtt catc 414

<210> 224
 <211> 432
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-004-Q1-E1-G10

<400> 224

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 tcttactact cttctctctt cgaagatgtt cgaaataatg catgcaatca tcagggtgat 120

aaacatagtg gtggaatga tggcgggtca acatctgcag gccaatctcc acggcttaaa 180
 tcttttggtg gtagatcttt tcttttctaata gatgtggatg ctggactaag aaggccgctg 240
 aattcatgct cagtggagac aagttgaaaa tggaacttat ttttgccaac ctgactacct 300
 gagcactctt tgtttgggtcc tccttgagtc agtaactctt gttgacttaa catagagatt. 360
 tgtacagtgc aaatgttcat ggctcggaac agtgggtcac cggtaaaaca agagcagcan 420
 gatagtacaa tg 432

<210> 225
 <211> 383
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-004-Q1-E1-G11
 <400> 225

ggtcaagaat tcccgggtcg acgggaagga taaatcatac agcagcccct ctggccctct 60
 gctaccatca ccgatgtggg attactacag ccctgaggca ggctggaaga tggatgagat 120
 aaagatggcc ccacaagtta gctacagtaa aggaattggc ccagttatt gaagccatat 180
 atattgtatc agattactaa gttacttgca acctagcaga agtgaaatgc ttttgttgaa 240
 agaaccatta gcatggatct aaaaagtatt tatactatc tagcattcca agtggggtca 300
 tgttttatgt atctactatg tagcatctag tgtgcaagac atgtaatgca aaaaaaaaaa 360
 aaaaaaaaaa aaaaaaata aaa 383

<210> 226
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-004-Q1-E1-G6
 <400> 226

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 cgaggatgta gttgtaatgg aagatgacaa caccaagtca gctgaatata aggactccaa 120
 aatgggttatt gtagaggatg caaatgcaaa cgaagatgac aaagccaagg cagtagaaca 180
 cgaggattcc aaagcggctg gtattgaata tacagttgca aaggaagatg ccaacaccaa 240

gtcagcagaa cacaaggact ctaaaatggt tattgtagag gatgcagatg caaaggaaga 300
cgacaaagcc aaggcagcag aacacgatga tcacagagca ggtggtgtgg cagcagaacg 360
caaggatcac agaacaggtg gtgtggagga tgcagatgca aatgaagaca ttagcgccaa 420
ggctgaag 428

<210> 227
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-G7

<400> 227

ggtcagaat tcccgggtcg acgggaccta ctcaccacat gttcgcgcg c aagttcgcg 60
ccgagaccct tgcgccgctc atggagatcg ccgactccgt catcctccgt gactaggcg 120
caagtgttcg tggacatgaa cagaacaagg gttggtgatg tgatgaagaa gcataagctg 180
atccatccat ccatccccctt tgtggtttct tcagagagga gcaagcaacc agcagcaaac 240
ctacttcgcc ttgttgttcc gtcggtggcg ccgtgggcga aggggatgct gctgcttgct 300
tagaatcaga gagtgatgtg gtgttggtgg cgaagtgcc cgactgcctc tatectatgt 360
gagtattgtt gtgtttcttg gtgtttttcc tttccacttt gatccgagcg agaggaagtc 420
gttggcacgc 430

<210> 228
<211> 466
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-G9

<400> 228

ggtcagaac tcccgggtcg acgggtgttt attaataatt gacatcttat tttctttctc 60
caagaaatac tcagagggct gtatacaaga tgtattacaa ttatggctcc gagctaactt 120
atgaggagaa aggatctctt gtcacgctaa taaatgatgt tgagattttt aagaccaatt 180
atcaaattag ccaaattat agtggatata tgccactagt atacgagttg catgatggca 240
acttcattgc agaaaacatg gtatgatttt gttactatg gttgcataca ttcttcttaa 300

gtaaactata ttgctaacta tatatgttac tattatgttc ttcaacagaa gctcgcgatg 360
gagttttttac ctgacatgat gtttaccgaa ggtcatatgc atatggttac cttaagaccg 420
actccgccga cggtttacca tagtgcatac tcgattttctc taaaag 466

<210> 229
<211> 440
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-004-Q1-E1-H11

<400> 229

gggtcgacgg gtcggggcaa ttggactcca tctgatattg atttttcttcg atgtaaaaaa 60
catggaaaaa tcaacaaccg tcacttggca ctatgtcaat aggttagtac caaaaaatga 120
tataaaatgg ctataaatga ttgtaaaaca ttcaagggtg ataataaac aacatggaac 180
aataaaagat tatagatacg ttggagacgt atcagcatct ccaagcttaa ctctactcg 240
tcctcgagta ggtaagtgat aaaaacagaa ttttttatgt ggaatgctgc gtaacatgtc 300
atattatatt tgttttcttt atagcatgga catttggact tttacttggt caaagcaata 360
gtctagtttt gagatgataa tttagatact caagtatatc aacaagcaac catgtctttc 420
anaatatcaa tgctaaaata 440

<210> 230
<211> 455
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H6

<400> 230

tcccgggtcg actgtccaga cgacgaagcc atagcagctt ttaggcataa cgtccgagac 60
gaatggctcg ccagacacct cggccaagaa aagccaagaa caatggccgc actaacaagc 120
ctcatgacct gcttttgtgc aggagaggac agctggttgg gaaggtgcag ccccgagcgc 180
ccaagtacat ccaaaactag ggatggaaac ggaaaaccgc gacgcaacaa ggaccgtcgc 240
cggactaagg aaaaattccg aagagcacgg cagtcaatgc cagattcaaa ggctcacgac 300
aaaatcagac aaaaccgccc ctccaggata acagggacga tccatccaac ttaaataaaa 360

tcctggacag gatatgtcag atacacagta ctcccgggaa gcccgctaac catacccaca 420
gagattgttg gatTTTTcaaa caatccggca gactc 455

<210> 231
<211> 418
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H7

<400> 231

accggtccag gattccccggg tcgacggggg acaccaaccc acagacaaga ccgccagtcg 60
tgccagcgcc aagccatggc aagaacgccg caacgctact ggacatgccg gacatcccta 120
tggcacagga tccggacatg catatggcac aggatccgga cgatgacgac aacgacgacg 180
gtacatttac caatgtcgat aagtactttg ccgaacatgg atacggtgac gagttctgcg 240
ggcctccttc tcaagaaccc aacctgaaa aagacgaccg cgatctagct ggtaaggcgg 300
agaaacccaa ttgcaacagg cgtcgtctgg cgttcagttc tcaggagacg cctccagctg 360
ccgccttcac cgagcctcag atagctgagg tgcgaaatat tatcagcccc aacacgct 418

<210> 232
<211> 457
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H9

<400> 232

gggccagaat tcccgggtcg acgggggttta cgcaggttgt tatcgtgctg aggatgctat 60
gggaaaacag ggacatgttt gatcttggtta tcagtgatgt gcacatgcca gacatggatg 120
gctttaagct tcttgagctt gatatggacc tccctgtcat cagagtaatg gaatgttaat 180
tggctggtgg cggcatgttc aactatggga aatgatgagc tcctactttt atgccagctc 240
tatgtcgtag gttgaccata ctattgtgag aatctcggcc aggatcattc tttatatcat 300
gttggttcat cttggaattc gtacagccgt ttatcgtcga aggatttact cacagaacac 360
aatcagtgtg attatgcttt tctacacttc tgtccagagc aatggatatg tattttgtat 420
tgtacgacta ccctctaag cactactcag ccttcag 457

<210> 233
 <211> 420
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-A5

<400> 233

tccccgggtcg atggggcgtct tacagtagta tggctgaggc agtgccagct tggtagttag 60
 tactagctga gaaaattcat gatgctggct gggagcataa catttatagg cttagttgct 120
 gtattgggtc tgttgatgta tgggagtttg tgaaggatgt tctatagacc tctgcagctg 180
 ctattctttg tctattaatc tatgtcctct tatagttgat aaagttgagt acttacagta 240
 tgtgtgcgac tacgtccctt gtagtttttag aaacacctga atttttctgt cctgttctgt 300
 taatcctgaa gataaaactc atatgtatat gttgcttaac tataccgtag cttcagaaac 360
 atattgcac atcaaactgc atgtatctgt gttcttcttc tggtcctgag gataaagatc 420

<210> 234
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-A6

<400> 234

attccgggtc gacgggggtca ggtgactacc tcgtagcccg gcctaagtgg tccaagactg 60
 agaatgatct ggttgataaa gggatcgaac cagagacaat taactggcca gaccgttgct 120
 ggacttggtt cttcggggct ggcggaacct tggaccctgt aacaggggaag tgcatttgga 180
 cgaacgatca aatggacata ccagtcagga agcttaagca gtatatcaaa gtagcacagg 240
 aagggacgtt ctttccagac agagagaacg acgagctcac aatggccctc gggaatcctg 300
 atcacctgg acggacacga ggcacgccag gccccattcc gtggaagggtt gggtttccgg 360
 aagcaggcgg ttacaaatcc catgagaaga cgaaaaaagt gcagcaggcc caaatgc 417

<210> 235
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-A8

<400> 235

attccccgggt cgacgggatac tgagtctttg atgtgttgatg atgtctgatt ataaatgaca 60
gactgtttat gtgcatctta ttttgctaca gtatataata agagctgtaa tgtaatgaag 120
tctcatgcca tttactgata atatggttat cgctaaatat gtttgatgtg catcttaacg 180
tctggtaata tatttgatat gaacctagcc tgtttcgaga aactacagag caaagaatga 240
gagatggcaa tgttaaatac taaaaggact ttggatgggt tcaactcggct cagtgatatt 300
cactcatgtt gtttcgcaa atgaatcagg ggcttatcag tctctcaaac caacttcaca 360
gttcaatttt cacaaattcg gttctttaac ttgatctgcc aaagcatagg cctctgggtga 420
atcagcaaca gtaacttgaa gat 443

<210> 236

<211> 415

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-005-Q1-E1-B12

<400> 236

gggtcaaggg taacttcgga aggaagaagg gccttcctt caacaaaccg aagggtcatg 60
tcccctaaaa gcttccttgc aaggtaaagg aaaggcttct caaatttgta tttgcccttg 120
gaaaaaatct cgtattactg gaggttcttc ttctgtgaa gggtcaccat cttggctttc 180
acctgccggg tcttcacgtc caccttggtg ccgcacaaga cgatcgggat gttctcgcac 240
accctgcaga tgtctctgtg ccagggtgggg acgttcttgt angtgagtcg ggaggtgaca 300
tcgaacatga tgattgcaca ctggccatgg atgtagtata cgtcacggag gccaccgaac 360
ttctctgtgc cggccgtgtc ncagcagtag aacctgatct tgccgtggct cgtct 415

<210> 237

<211> 361

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-005-Q1-E1-B4

<400> 237

gggtcgacct caaggccgaa aagaagaaaa taaaggctgc tgtcaagaaa atgtatgaca 60
ttcaggccaa gaagggttaac accctcatca ngcctgatgg caagaagaag gcgtacgtga 120
agctgacacc agactacgat gctcttgacg tggccaacaa gatcggcatc atataagcca 180
gagggagggt cctgcagtan gcgcttgtgt cgtggtttct tatgttattg gaattttgta 240
gttgttactt agcaaaaggc cttagtggct ccattgccta ccatatcgct gcacactttc 300
atgaatttga tgcaatcgaa gtgacttgtg ttgatgctaa tttgagcttt gcgtttggtc 360
t 361

<210> 238

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-B5

<400> 238

atgcccggt cgacgggaca catgaatcgg aagttagtag tatactatat gtgcttcacg 60
tacatctttt gagttatata ctttttgctc tagtgcttca gttatatctt ttagagcacg 120
tcggtggatt tgttttatag aaacctttgt tctcgcacgc gtcacttata ttaatttgag 180
agtccaacag aacatcatgg aaattttctc taattatttg aagcattcta gataaattca 240
atcaaatttt cttaagatcg tgttgaatac tatgaaaact ttgatacgtg ataattgttt 300
tgatatatgg agatggtgat attacagtcg tactagttga gtacttgtga atttgagaaa 360
tgcttgtgtt gaactttgtg agtcccgtaa catgcacgta atgtgaaccg tta 413

<210> 239

<211> 398

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-B6

<400> 239

gggtcgacgg ggtcatctaa ccatgggaga ccttccagag cctgcgagca atcgggcttg 60
ggtcgccttc agccttcgga acatctatac tcctccacct cgtcctcact tatectactc 120

aaccgggatg gatgccttcc cctctgctgt cgatccatat aaagaacatc cacaggggca 180
 agcacgggag cgattctgag acgtatgaca cagaaggag gtttgaacca gcgaaattcg 240
 atgctatatt cagcaagttt ggcaaaactc ggccaaatgc tttgtcagaa gatgagatta 300
 acgccatgct taaatacaac cgcaatatgt atgatttcct gggctgggccc gcggccaacc 360
 tcgaatggaa gttgctgcac aagggtggcaa aggataac 398

<210> 240
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-B7

<400> 240

attcccgggt cgacggggag aagaagaagt ccagcgagaa cgtcaagggtc atctacgccc 60
 gcgccaagca gtacgccgag gagtacgatg cccaggacaa ggagttgggt cagcttaagc 120
 gtgaggcccg gatgaagggt gggttctatg tcagtcctga ggctaagctg ctgtttgttg 180
 tcagaatcag aggtatcaat gccatgcacc caaagaccaa gaagatcttg cagctgttgc 240
 gtttgagaca gatattcaat ggagtggtcc tgaagggtta caaggccacc atcaacatgc 300
 tccgcagggt cgagccatat gttgcatatg ggtaccgaa cctgaagagt gtgagggagt 360
 tgatctacaa aagaggttat ggaaagctca acaagcaaag gattcctctg accaacaac 419

<210> 241
 <211> 390
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-005-Q1-E1-B8

<400> 241

attcncgggt cgacgggatg acctgtgagg cttccatgaa tgggaccac tccttgcgtga 60
 gotgaaggaa ctgatataga agaagtgtc gagcaagaag catcaagttc cgtgaagcgt 120
 gtggcgatgg atcttccttc cggagagaat gagcggatg ggctcctgc gctcatctgc 180
 tggagcgctg ctgcctagta gtagtaacct agatatagat atagtaccta gtataatgta 240

atgcggggaat aaccagacga actgaagtga tgctgcataa tgcagtgcac tgcagccgca 300
gtactagtag cagccagtaa gcacggccat aatagtcggg cgctacagtg tgtgtcagct 360
cgtgcaccgt ggtntgcctt tcgtgtaagc 390

<210> 242
<211> 421
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-C11

<400> 242

gggccagaat cacgggtcga cgggatttaa aatcggtttc attgagtttc gtctgaagcg 60
agcttttggc acaaattctg agagctactt atctgacata cgtgaaacag tccgcgaact 120
cttcaatgaa tactgcaacc ctacagatct gccaaagtga gcttcaaata gtgcagcttt 180
ggatgcggat aatgatttat tggaagattg ggatcagcat ctcaatgaac aagcaagttg 240
tcagatatct acagaacttg atgactacct tgaagagggt ctagttccaa gaaaggatga 300
gtttgacatt ctaaactggg ggatgaatca taccacaaag taccacacgc tagcagctat 360
ggcacaggac atattagcta tgccagcttc tgctgtccaa tctgaagcag cattcaacag 420
c 421

<210> 243
<211> 422
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-C12

<400> 243

gggtcgacgg gggcggtgaa gcctgcgccg cagcacagtc ggccgcgggg atgagggagc 60
aggcagtcct gccggcgctt gtttgaacgg ctggagcacg acgagcacag attgaagaag 120
cacgacggcc gtaagatggc catctaacag tcaactgctt tgctgcaacc ttttttttag 180
gaaagcctca aatctgtggt atacagcata caaccatct gccactagtt ctaatacttt 240
acagcccatt tgctaactat taaagttttt ttggaggcca tatgcttttt gtgaacatta 300
cagcccatat tgtggccacg gttaaaataa tatacgaaat tttgcatatt tcagtgcagt 360

ccgaactttt tttaatcctg aaatttcgac tcacattcaa actggattta aagatcaatg 420
tt 422

<210> 244
<211> 404
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-005-Q1-E1-C5

<400> 244

attcncgggt cgacgggtga ataaacgtta ttatcttgca aacctatcca acaacacctg 60
tgaagtactt ctaatttcat acttggttcta ggtaaagcga acgtcaagcg tgcgtacagt 120
tgtatcgggtg gtcgatataa tttgagggaa tatttgttct accttttagct cctcgttgag 180
atcgacactc ttacttctcg atgactattg cgatccccta tacctgtggg ttatcactct 240
ccacatctat tggcgtaagc tgatggacaa aacgacttgt gcggccaacg ccacgggaga 300
atacgacaga agtcgacggg gatggtctgg ctggcatgaa gcaaggggat ctaatcattt 360
ggtatgttga gcagcagaat gccaaggcg catatacttc taca 404

<210> 245
<211> 436
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-005-Q1-E1-C8

<400> 245

gggtcgacgg gacaggaaaa gacattattc agaaggtggt catcacggat cttagggagg 60
aagtggtagt ttacatcaag ggaacaccgt ttgttttgag agagttagat caacctgttg 120
atacactgaa gcatgtggga ataagtggcc caatggtaga gaacatagag gcaaggctga 180
aggaggatat actttctgaa gttaaacagc tagaaggctg gctgcttctg catcaagaag 240
aatttaacac agccacaaat caatgcagtg tactaggtta ttgngagcac atagatctgg 300
aggacgtaat gacaccggct gaagtgtaca gcacatttaa gggatcangg ggtattgtat 360
tgactacaaa aggatacctc tgaccaggga aagagaagca ttagctgctg atgttgattc 420

aatacagtca tcaatc

436

<210> 246
<211> 233
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-D2

<400> 246

gggtcgacgg ggtgtgttga ttgcttattt tgatgaatct atggctagta aaatagttta 60
taatccatag aggttggaaat acattaggtt taacacccat ataaataaat aatgagttca 120
ttatagtacc ttgaagtggg cttttgtttt ctttcgctaa cggagctcac gagttttcta 180
ctttaagttt tgtgttgtga agttttcaag ttttgataa agatttgatg gat 233

<210> 247
<211> 412
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-D4

<400> 247

gggtcgacgg ggtgtctcaa aaaaaaaaaa gcgaaagagg tctactacca tcccagacga 60
ggaggagcag agccaccgca atcgaatccc cttccttcct tccttcgctc cccgacgacg 120
atggagcgcg tgagaagggc gtcgcatgcc ggctcctggg acaccaaaa cgccagcaag 180
ctggaagaag aacttgatgg ttggctttcg gcagctgctc tcaccaagtc acctggagtt 240
aggggcataa ttgcacccca tgctgggtat tcgtactcag ggcgctgtgc agcttatgct 300
tttggaaca ttgatccaac taacatttct cgggtgtttc tgcccggccc atctcatcac 360
tactatactc caaatgtgc cctgtcaaga gctactggtt atagcacccc ga 412

<210> 248
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-D6

<400> 248

gggtcgacgg gagaagctaa cactccgact ccaaataac tcaagatgaa ggtgttgccg 60
 gtctagctct tgtgtcaacc aactcctacg acatatttga ctcaccaaat gaaggaattg 120
 gaagatgctt catggccaaa ggtccaaagg taacacatcc cgagtatgtt gatttcaata 180
 gtgatgaaga tgacttgcta ggtgatgatg atttacgtgt tggcaactct agtgatgaat 240
 actatgatga aacgtcaatt aatcatgcaa atcaagataa aacgacagaa cattataagg 300
 aaaaaaatga gattctaact aaagaaacaa acactcctaa gttagctcaa taaactatct 360
 tcgaagatta acgagaactt ttaagggctc atgagaagtt atgcttcgaa aagctc 416

<210> 249
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-005-Q1-E1-D7

<400> 249

attcccgggt cgacgggaga agggtagtag ggtacctagg gtttatggcg tctcgttggt 60
 tttgcaagct agcatgtgac tccgggatgc ctgttttaag attaagattt cgcttggtgtt 120
 gagagatatt attatttact gctttagacc tacctgggat accatcatat tttgttgatt 180
 atggaacagc ttttatcctg cttaagctct gtattttgcc cgagttgaaa tggcctgacc 240
 agttgaaatc cttcgggtacc ctagtatggt tacctacctg cattttgaat gaatttctcg 300
 tgtagcgggt tggctttaag ctgttcattt gttttagaaa ttgttaactg gttgcttggt 360
 angggatagt tgtattgtgg ttagtgtaga atacctgttg taggcatgtg taattcctgn 420
 gtgacttgcc tagtatcctg cac 443

<210> 250
 <211> 455
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-005-Q1-E1-D8

<400> 250

gtcaaaaatt cccgggtcga cgggtctatg tacttcacta atatcttttg agcttgataa 60

gtttttgctc tagtgcttca cttatatctt ttagagcacg gtgggtgtctg aattttgaag 120
aaattgataa tctctcatgc ttcacttata ttatttttaag agtcttttaa aacatcatgg 180
tatttgctat ggtcataaag ttggctcctag aatgatgagc atccaagttg ggtataataa 240
aaactatcat aggaagtgaag ttggatgcta tgatcaattt gatacttgat aattgttttg 300
agatatggag gtagtgatat taaagtcgtg gtagttgggt gattatgaat tcaaagaatg 360
cttgtgttga agttagcaag ttncgtaaca tgcacgtttg gttaaaagtt gtgtaacana 420
ttttgaaaca tgaagtgtac ctggcttgtg catcc 455

<210> 251
<211> 453
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-005-Q1-E1-E10
<400> 251

tgccggtcgt aaattcacgg gtcgacgggg atgcactaaa gctataagtg tatgaaagct 60
caaaaagaaa ctaagtgggt gtgcatccaa ctgcgttgc cacgaagacc tagggcattt 120
tgaggaagcc catcattgga atatacaagc caagttctat aatgaaagat tcccacaagt 180
atatgtaagt gacaacatag gagactctct aacatgaaga tcatgggtgct actttgaagc 240
acaagtgtgg taaaaggaaa gtagcattgc cccttctctc tttttctctc attttttttg 300
ttttttgggg ccttctctct tttttcatgg catattttcc tctttttttt atttctcgtc 360
cggagtctca tcccgactta tgggggaatc atagcctcca tcatcctttc ctcaattggg 420
acaatgctct aataatgatg atcatcacac ttt 453

<210> 252
<211> 408
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-005-Q1-E1-E12
<400> 252

ggtcgacgtc caccaaggaa aantccacca tctcatcgaa agacgggaca cttttgcttc 60
tatcaagtgg tatcagattt ccaggttgc cggtgagatt ttacagtttt ttgtagttta 120

gatcgagtat gttcttcata cctacagtcc acgaaaaagc cacaagaaaa aattagggtt 180
 agttcatcat atccgaacca atctgagcct ttgcataatc tttttagggt tttgctttgt 240
 tgaatttgcg gttgcatcgt cgtgtctagt tgctggctct agagtctagt ctttttagagt 300
 ttcgagttct ggtcataagt tgtcacgccg ccgccgcacc atcatcatca cccctgccat 360
 ctaccaccac cgcttatccg ccaccgcttc gaatecgtat ctatatac 408

<210> 253
 <211> 168
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-E2

<400> 253

cgggtccacg gcaagaacca aaggacgaga agcggctgcc ggcggggaag tcggccgcca 60
 aggagggcgg cgacaagaag ggcaagaaga aggccaaaga gagcgtggag acgtacaaga 120
 tctacatctt caaggtgctg aagcaggtgc accccgacat cggaatct 168

<210> 254
 <211> 441
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-005-Q1-E1-E5

<400> 254

aattcncggg tcgacgggat atcattatga agttggattg cctgtttctc ttcacataga 60
 aaaccgccat ttgtagaatg ttgtttcgct tcacttatat ttgttagagc gtgggaatat 120
 cttttgtaga aagaattaaa ctctcttgct tcacttatat ctatttagag agatgacagg 180
 aattggtcac tcacatgggt agtcataaaa tcctacataa acttgtagat cgctgaatat 240
 gatatgtttg attccttgca atagttttgc gatataaaga tggatgatatt agagttatgc 300
 tagtgggtga cagtggattg tagagacact tgtgttgagg tttgcaagtc ccatagcatg 360
 cacgtatggg aaccgttggt tgacaaattt gaagcatggg gtgtttcttt gattgtcttc 420
 cttatgagtg gcggtcgggg a 441

<210> 255
 <211> 363
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-005-Q1-E1-E6

 <400> 255

 attcncgggt cgacggggaa ttgaaacaca ccacagatgg aacgcaatgg agaaagatcg 60
 acagagagtt caaagatttt gcagctgacg caaggaacat aagatttggg ctaagtacag 120
 atggcatgaa tccttttggc gagcagagct ccagccatag cacctggccc gtgactctat 180
 gcatctacaa ccttcctcct tggttgtgca tgaaccggaa gttcattatg atgcaattgc 240
 tcatccaagg tccgaagcaa cccggcacca acatcaatgt gtacctaagg ccataatttg 300
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 agg 363

<210> 256
 <211> 438
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-005-Q1-E1-E7

 <400> 256

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 agtcctttct gatcctcggg actcctgatg aagctcgcg cgtccccggt gtcacccggc 120
 ttggccgccc atggaaagcc tttccctagg tcggggaagg agctgaagcg aaagcaagaa 180
 catgatagca caacagcaag tagtgagagt agcaagctaa aacatttcat aacaggaagt 240
 ccagggcacg atgatttgaa tgatagtttt gatgagcaat ttggcttgaa gacttctggg 300
 tctggaaagg agctgaagcg aaagcaagaa catgatagca caacagcaag tagtgagagt 360
 agcaagctaa aacatttcat aataggaagt ccaaggcatg atgatttgaa tgatagtttt 420
 gatgagcaat ttggctac 438

<210> 257
 <211> 432

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-005-Q1-E1-E8
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 gatggcaatg aggttttctt ccgcatcaag agatccacac agctgaagaa gctgatgaac 120
 gcttactgcg accgtcagtc tgtggatctc aactccattg ctttcctttt tgatgggtcgt 180
 aggctccgtg gtgagcagac cctgatgag cttgagatgg aggaaggcca cgagatcgac 240
 gccatgcttc accagaccgg aggggtgcttt cctggccctt agaaggagct tgctgcagcc 300
 tggctgttct atgtcgtatg ctacctttag aactagagta aaatgtaaga agtgaaagaa 360
 cttgtgaggc tatggttctg tgccatagcc tgaggggggg tctggagggtg aaacaacatc 420
 ggagtactgt tg 432

<210> 258
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-005-Q1-E1-F12
 <400> 258
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 taccttacca tcattgctag cctcttcggg accgtgcatt gctctttctc accttgagag 120
 ttggggcaaa cttcactggt gcatccaaac cccatgatac gatacgctct atcacacata 180
 aacctcctta taccttcctc aaaacagcca ccatacctat ctattatggc atttccatag 240
 ccattccgag atatattgcc atgcagcttt ccaccatttc atttattatg acaggcttcg 300
 tcattgtcat attgccttgc atgatcttgt agttgacatc gtatatgtgg caaagccacc 360
 atgcataatt tatcacat gtctcttttg tttcattgcc catcccgata caccgcc 417

<210> 259
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-005-Q1-E1-F5

<400> 259

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cctcgtcccc cgccccctcg tcggcgcccg atctaagtca agatgagtcg tggcgggagt 120

gctggtggtg gtcaaagttc tctgggttac ctgtttggag atggcgagcc tgcaaagcct 180

gctgcagcac cagctgcgaa gcccgcacct gctgagaaac cagcaccggc agctgctgat 240

gtaccaagc agattcgagc tggcattcca tgtagccggg cgaacaacta ttaccgtgca 300

gatggccaga acacgggcaa cticcttact gaccgtcgtt caaccacagt tcatgctgct 360

cctggcggtg gtcctccctt gggctaactt gttgggcgga aagcaatgtt aatgatggtg 420

cctgcttaat gaacg 435

<210> 260

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-F7

<400> 260

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cttcctctcc cggccccggt agatctcgcc ggcaggagat ggcggacgag aagcagcagc 120

aggccgtagc gcccacggc gtctggaaga cgatcaagcc attcgtcaat ggcggtgcct 180

cgggatgct cgccacctgc gtcattccagc ccatcgacat gatcaagggt aagatccagt 240

tgggtgaggg atctgcagct caggctgcaa agaccatgta tgctaagtga ggccttggtt 300

cctttttaca gggtttgtca gctggtttac taaggcaagc gacctatacg acagctcgtc 360

ttggattctt cagggttttg acaaacaag caattgagga aatgatggg aagcccattg 420

cattgtttca gaaag 435

<210> 261

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-G5

<400> 261

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tccaagggct ataagttggc ctacgcctgg gacaaggagg cgccgctcac ggggcagcag 120
aacgccgcca tctccgcgt ctgcacgcc ctgcgcgcc ggtgttccc ggctaactctg 180
cacgatgcag acaacgactc tgctttcaag gatgccggtg cagtggatgc ggccttggtg 240
aacacacatc agttctacaa atgggttggc caactagaat ctgccatgaa atccgagatt 300
gacgataagt atgcctcta tgagagtaca ttacaggaac atgttatcac atgtgatggt 360
atccttcgac aagtggatga cacactcaac ttgtttgaac aagtacaatc cttgcac 417

<210> 262
<211> 436
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-005-Q1-E1-G7
<400> 262

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ttgagaagaa gattgcagaa cttgagaggc gggctaaagc tagaggcgaa tctcaagagt 120
aataagctaa caggtaagtt ttgatcgagc acgtgaatcc tatcctaaag aagcactggt 180
tgtaacctct gtctggtggc gaaggggtat ctggcaccga cttaccata tagcaccaag 240
atltgacttg gactatccaa ttttgtgagc atgtgtgtgt ggcaactggt gtttcgagcg 300
aataaagagg gatcctggca gataaaatcg ccagtgtttg ttgggttaac cgcagtgatg 360
ctggtcgagc agaaaccaga gggtaacttat tattcttgta tcacttgctt gacatttgag 420
aatcgaacga tgtaat 436

<210> 263
<211> 440
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-005-Q1-E1-H5
<400> 263

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atcaccgaag accaggaggg aacgtccctc ttggacagcg agggaaagga gtccggggcca 120

tctggacccc ctccgacgac cactcccgag cgtccaaggc ccccaacagc acaggttctt 180
tccaactggg aggggggagg gagccaatgc cagtaccgaa cacctccgca tggggggagg 240
ttgactggcc ggatacgcta gaggagttag tgagcaactc cgtcatagtt gaatggcacc 300
gcacccttat ggtgagcatt atgcagagtg ttcgggtctgt ccaatccgta ctgaacgacg 360
atgtccaagg ctttctaaca tgctttgagg taagtcaagt aatgataatt cctcataatg 420
tggttatagt tgtttaattt 440

<210> 264
<211> 439
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-H6

<400> 264

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ttttatgttt taattagtgt tcgtgccaaag tagaaccatt gggaagactt ggggaaagtc 120
ttgttgatct tgctgtaaaa aacagaaact ttagcgctca cgagaattgc tgccattttt 180
attggagagt gctatttagt tagttatttt tgcataatgat taatatataa attcctcacg 240
tccagaaatt tatttttagaa cttttgggggt tccagatctt gcgttagcta cagattacta 300
cagactgttc tgtttttgac agattctggt ttctgtgtgt tgtttgctta tgtaaatgaa 360
tctatggcta gtaaaatagt ttataaacca tagaaaagtt ggaatacagt atgtttaaca 420
ccaatattaa taaattata 439

<210> 265
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-A10

<400> 265

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ttgcagtgtg aaaccctact cctgcttggt tttggattgc aatagcgaaa gagaatgaga 120
gtacaagggt tggggatcaa gtgggtcgaa tcctctacgg cgggtccctg ccattctttt 180

atatctacct tggtcctctt ccaccgaaaa cattggcgag aaggggtggc acacaatggc 240
aattttcacg ggggacaggg atgtagtcta tcgctagaaa aggtggtctt caccttcaaa 300
gacaccgtcc atgacgcatt ggtgggctct ggaatgatct ctaccctaca cgcccatcgt 360
catggtcac ttcacccgat cgggcaatat ttggggttgc tattggaacc tgcattgctgc 420
cctt 424

<210> 266
<211> 285
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-A11

<400> 266

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gcgacctgat gtacgtcaag cgtcccttcg tctactacta tcctgtgatc tgcccaagcg 120
gctttatctg ttgtctgtct gtttgaatgt ttgctgtgtg gtgtttgggt tacaacctgt 180
tgtgttgat gaacctgtgg tatgtttgaa cctgcttcgc accttggtca atatgcatgt 240
tatcgggttt gccgaagacg caactggcct atcgtaaac gggga 285

<210> 267
<211> 429
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-A6

<400> 267

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ttatctataa gggaagtggg tacgtgctag attggagcgg acgctacaag attgtgcaag 120
gaatatgttc aggctgcac tacctacacc acgaactaga ccatgagcag aacatcggtc 180
acctggattt gaaagcgagc aacgtactgg tcagccgcgg cgatggggga gacatcacct 240
gtgtgaagat cgccgacttt ggctctcaa agttcttcaa agcggatcta acacactcgt 300
acacggagca ggtcgttggc ctattggcgt acatggcacc ggaatacgtc tgcaagggca 360
gaatttcacc caaggccgat atatacagct ttggcattct tattctggag atagtcactg 420

ggc gatgcg

429

<210> 268
<211> 429
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-B10

<400> 268

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acgggaactc gaaggagttc ccggcgccag gtgttgctcg actcatcgtc cgatgactcc 120
gaggcggact cttccccgga agacgaggag gaggaaaaag aggcctctcc cccggcaggg 180
atagagaaga aaaggaaggc cgccccaaact ggggaggccg gaggggtcaa gaagggaagg 240
accccccccc tccgaactac tccaccaacg ccgacgacgg cgaggaggag tggccaccaa 300
gggctaagcc cttggcgaaa tcgtaagcgt ccgggtacca gaataactca tggcgtttca 360
tttgttgac agaatctcct aacgccgaat ataaccctgc agcccgcca aggaccagct 420
tgatgctc 429

<210> 269
<211> 268
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-B12

<400> 269

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actggaccat gtcctgtag ggcacattat aatcatgcac atagaataag ttgactactc 120
agttaatgca taacactgtc aagatcatca ccgaataaag ggacatcatc ttggatttca 180
acatgcggcc gttctaaagg atacattctt acgtaagcgt gcaatcgaca tcataacctca 240
tctatagtgt catctaaatt cacttcat 268

<210> 270
<211> 447
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-B5

<400> 270

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aatgatttga aatttgagcg cacctcacgt accaaattat ctagtacttg gaaaaaactt 120
ggaatttttt gattttatct ctagtatttg ttttgaattg tttttcaacg cgggtgcaga 180
tgagtctggg caccaaatcg ctgcactcgt tctcacagga tcttcgcct atgactcgt 240
tatagccaga tgtatggctg cctcgcccaa tccagcatga gactatgccg acccagcgtg 300
tggtaggcta taggcctcga aacactcttt tccccctctt tttttttgac cttttgtggt 360
cttagttttt tagttttttt acttttattt agacttccaa atttttttgt ataagaaatg 420
ttaatcatgc attcgataaa tattaata 447

<210> 271

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-B6

<400> 271

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gcacggcggt ggttttatct tgaagaaata gatgtactct catgcttcat ttatattatt 120
ttgagagtct ttagaacagc atggtaattt tcttgggtta taaaattagt cctaatatga 180
tgggcatcca agagggatat aataaaaaact ttcatataga gtgcattaaa tactatgaga 240
agtttgatac ttgatgattg ttttgagata tgaagatggt gatattagag tcatgctagt 300
tgagtagttg tgaatttgag agatacttgt gttaaagttc gtgattcccg tagcatgcac 360
gtatggtgaa ccgttatgtg atgaagtcgg agcatgattt atttattgat tgtaatcctt 420
gtgagtgg 428

<210> 272

<211> 443

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-B8

<400> 272

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ccagaccttt ggatttggca ttctttcttt ggtttaccag gatctcataa tgatataaat 120

gttctccacc gttcacccat gtttgcaaat ctagtgaag ggcattgctcc agaggcgaat 180

tataccatca atggtcacaa ctacaaacac agtgtattac cttgccgatg gcatatatcc 240

gcagtgggca acatttgtga agacaattcc aaatccaaac ggtgagaaga acaaaaattt 300

ctccccggtt caagaagcat gtcggaagga tgcgaacga gcctttggtg ttctgcaagc 360

tcgttttatt attgtacgtg gaccggcaag gtattgggat ctggagacac tcggagaagt 420

gatgacagct tgcattcatcc tgc 443

<210> 273

<211> 371

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-C11

<400> 273

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atcagacact tcatcacgga aaaccagttc cctcctggct gtgtacaaga gctgtatgcc 120

tcgttgacag aacctctgct gcctgctgtt ccagtgcctt cccctcaggc tatacagaaa 180

ttccttaagt tcatgaggaa ctaccctgga ctaaagcacc caaggagaac aagcacattt 240

atcagcaaag tatttcaggc tgccagagcc atgggggcag ctcagtatgc cagtgtcatg 300

acagcgggat caaggtaca agtgccgcaa gactggatga atgtgactga ataattggga 360

tatctactgc t 371

<210> 274

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-C12

<400> 274

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acccatgttg atatagcatg tgaccaggac ttggtaaagc ttgcgctgga gcttactaac 120
 cttccgatat gtgtatcgtc tgtggatcct tcagcattcc aatctgcggt agaggctggc 180
 gcgcaaatga ttgagattgg aaactacgac tccttttacg acgcaggcat cgaattctct 240
 tctgagcaaa tactgaacct gacaagggag acaaggaaga tgcttccaga catcacgttg 300
 tcagtaacag ttctcacac tctgagcctc ccagatcaga tgagacttgc agagctactt 360
 gaagaggaag gtgccgatat catccagact gaaggaggga agtggttctag tccgacaaag 420
 cctgcggtgc ttggcctaata tgaaa 445

<210> 275
 <211> 443
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-C2
 <400> 275

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 tcagttatat acagaaaaac ttgaatggat gtgcgtttgg ggattataca atttaaaggc 180
 aactttatct ttttgctttt agcgtatgga cctgcagggtt atatctaata gtagtagctt 240
 attgacttct gaaagcaata taagcccaat agtctttgca aaaaaaaaaa cccaccaact 300
 actggtttta tagccagtta gaccgtatca tcacacttat tttttctctt attgggttgaa 360
 ctccaattat tctataattg ctacattaac aaactgttct tcacattcgg ttgtgatttg 420
 gtttcagaag ttcattttta cat 443

<210> 276
 <211> 200
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-C6
 <400> 276

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 tttcaagtcc gggcggtatc tgctgcagtg ctctagctgg atcatgctgc tcaatgaatg 120

cggccgctct gtaggatcta agctgatgga agcgtgcatt cgacgtcagc actcttcggc 180
tctgtcagct aatttctggt 200

<210> 277
<211> 441
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-C8

<400> 277

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cattgttttt aaaatcaaaa tacatgtcat tggaacatga tattctttga gcactgagcc 120
tctatgaaac gggcaccttc taagacttct tcaaaatagt gctcggggcga gtccctggccc 180
ctgggtggaa cactagttagc aatatcgggtg gcctccatct tcgcccagta tgttttaaca 240
tgggcaaggt ccatccgcgc accctctatg cacgctgacg gcttgacagc gtcgatatgc 300
ggcacatcac aaataaatcg ttgcacaaaa ccaaataaac tatccagact tggttccttc 360
atccacaggt gatccaagac ggccttcatg gcaagcccgg ataacctatg gagctcggcc 420
cattcagcca ttgtctggt c 441

<210> 278
<211> 407
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-D10

<400> 278

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gtgcacagat cgtccaactg ggttaactcg cttctgcatt ccggtcaggc tggaccagcg 120
cctgaccagc acatgccatt gtctgaaggg tttcttaaca acagcagatg atgccactta 180
tatgtgctca tctgaccaac actgatggta cgaagaagct gcgtgggtgtt ggtacccgga 240
gaatcgctgc atatggcaga tcaaagctgg gaaaacattg attaatttgt aatctatggt 300
tatgttttgt tagtgggtgat gttacagcaa tgctcatttg atgttagctc atgcaaactg 360
ctaattgtgtt gctaacagta gcaactctggt gtgtttcgac agattgc 407

<210> 279
 <211> 339
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-006-Q1-E1-D11

 <400> 279

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 aaaaaaataa taaaaatggg taaaaactaa aaaaaaatc aagtcaagaa aaaaaaaaaa 120
 actaaaaaac aaagaacaat tatcaaaaag gtatctaaaa aaataaataa atgatgcaac 180
 attaaaaatg ctcaactaac caaaaacaga tcatacgaag acccctgcct agtggttgca 240
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 tatgatTTTT tttatgttac tggatgatgtg aaaaccctg 339

<210> 280
 <211> 412
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-006-Q1-E1-D12

 <400> 280

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 ccgcttagta taggtgaagg ctagcaaagg actgggaagc gaccagctag agtgcgacaa 120
 cattaatgaa catgcattaa aattaatcaa catggaatgc aagcatgagt aggatataat 180
 ccaccatgaa cataaatatc atgaaggcta tgttgatttt gtttcaacta catgcgtgaa 240
 catgcgccaa gtcaagtcac ttaaattcatt cagaggagga aaccacccta tcataccaca 300
 tcagaaccaa tttaatatga tggtggcacg caaggtaaac cattataagc tcctagctaa 360
 tcaagcatgg aacaagaaac tatgatctct agttgtcatt gcgaacatgt tt 412

<210> 281
 <211> 445
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-006-Q1-E1-D5

<400> 281

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cgatggtgaa taactatgca atggaacaag cattcaatgt cgatagatga cgcattgcacc 180
acagtacaca tttggtgcca actcgccatt cccattctct atgccaccac aggcagggtcc 240
cacggcacca agtagttacc cataactcagg accaatgaat aataccccca aagggtgcaac 300
tgttgatgtt tcagctactg aagtggcatt caactggatc ttcggacgca gctgatgtgg 360
cagaaacatc gaagccttca tagaaatttg ccatcggtga tgtttcgccc gaagagttgc 420
aaaagcagta tgagcgtcaa tcttc 445

<210> 282

<211> 385

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-D6

<400> 282

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ccttacgtgc cgaggctcct gagctggccg gcaacgctag caaggatctc aagggtcaagc 180
gtatcaacct tcgccacctg cagcatgcga tctgtggaca cgacgagctg gacaccctca 240
tcaagggcac catcgctcgt ggtggtgtca tctctcagag acacacctca cgcattacca 300
ataaatccac tgactgaata atatgcatta accggttgtt gttgcatgta gtatcttcga 360
gataccatgt tatgttgtgc tatct 385

<210> 283

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-D9

<400> 283

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caacttgccg acaacgccaa gcaatgggaa tggatcacccg ataacaacgt gggcgaaaag 120
ggatcgccat actgggttagg ctcatattga tacggataag caaaacttat taactgatcg 180
cacattcagt caattaggga accaggactg ttctgtctca gtccatgacc acacaaagca 240
attcagcagg tggaggatac ggaaacggaa gctacaaacc gatcctaatac aagcatgatac 300
tgtcagattt ctaacggaaa caaagatagg attattttta gagagaatta ttggactact 360
atatggggca gaagcctatac ctaagctagc ctgcgagact actgtttctg atg 413

<210> 284
<211> 408
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-006-Q1-E1-E11
<400> 284

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taagagaata ctgcctcatt atgatctgtt gtgtataatt agaacttctt gtgggtaaaa 120
aaaacaaagg ttgggataag gaaaagctga acttaaaaac tgtacgtgag ttcataagata 180
gttggtacata cttgatgga tagattagat ggcaattctt tactgttgat cacgccaagg 240
atcagggttca gggccaccga tgctatgtat tccactgtag ccatgaagag cagacctcca 300
aaggcgctca atgctctctg cagcgtgctg catgtgcata gctaagttca gttaccgcca 360
acaacggcgc cgacagatgg tggcgaaagg agatcagcaa ctcaataa 408

<210> 285
<211> 409
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-006-Q1-E1-E12
<400> 285

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aaaggctggc gctggcatgg actgagcggg tctcctccca cgtgggatga gattgcttgt 120
acagcgccag caatgaaggg gaagaatgtt tggctcctcc tgtttgtttg aggatgcacg 180
ttggatggat ggacgaatgt ttactctgtt attagatatt gatgatcagt tgtatgctac 240

ccgtagtctt acagattgat ttgcttttcg ctgaccactg attctgaata ctgtagcgaa 300
 caatgggtctc aggaaacata aaacacgggc cgccctaaag gttcaaacct tacttaaccg 360
 tgcattgcaaa ttcaaagcac ttcaaatggg caccocaaatt tcactttac 409

<210> 286
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-E5
 <400> 286

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 aagaagatgg aggtgtctca gactccaag tacttctgtg aattctgtgg gaagtttgct 120
 gtgaagagga aagctgttgg aatttgggga tgcaaggact gtggcaaggc caaggctggc 180
 ggcgccata ccatgaacac tgctagtga gtcaccgtca ggagcacgat ccgtcgcttg 240
 agggagcaga ccgaagcatg attgccctac tgttgtcttg aggaatccag gggttctgta 300
 gtggagtga gacttaacaa tctctgtatt ttggctatcg agcgatggat atctgttagt 360
 aattttggtt ctgatttttag gatctttgaa acttgaaagt atgtcgctac agctgcctgt 420
 tatgcgttat gctaacctat ttgtatttt 449

<210> 287
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-E6
 <400> 287

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 tatacccttg ctcatgcaa ggcatgtgag atgctcgctt taccttaaat gggttgagac 180
 caagtcttcg ctcgattagc tctcacctta cccattatac agctcaacgt acacacgttt 240
 tctcttcttt tttcccttct ttccaccttt agtttttatt tatttaatat tttctattcg 300
 taaacaataa tgtttttggc aaaatatgct atttttatgt aatttcgaaa aattcctcct 360

gaagttcaaa aaagtgtttc acgtacttta aaaaatgttc ttatttcatg catctaggaa 420
acagtttatg aaaat 435

<210> 288
<211> 444
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-E7

<400> 288

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ccgcgcaacc gagccttcgc cctcctcctt ccccatctcg ccagcggcgc agcccaccaa 120
ccacccccac ccgccccat gagggagtgc atctcgatcc acatcggcca ggccggcatc 180
caggtcggga acgcgtgctg ggagctctat tgcctcgagc atggcattcc gcctgatggc 240
cagatgcccc gtgacaagac cgttggggga ggtgatgatg ctttcaacac cttcttcagc 300
gagactggtg ctgggaagca cgcccccggt gctgtcttcg tagatctcga gccactgtg 360
attgatgagg tgaggactgg cgcttaccgc cagctcttcc accctgagca gcttatcagt 420
ggcaaggagg atgcagccaa caac 444

<210> 289
<211> 429
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-E8

<400> 289

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gcatgcattt cgatgggtcc aagatgcgca ccggcttggg agccggtgtc atcctcacct 120
ctcccaaagg ggacaagctc agatacacgc tgcaaattca cattaccgcc tccaacaacg 180
tgcccgagta cgaggcgtc atacacgggc tccggcttgc caaagaactc ggcattcgcc 240
ggatcctatg ttatggcgac tcggacttgg tggccaaca atcatccggt gactgggatg 300
ccaatgacgc aaatatggca agctatcgct tcctcgttca gcagatcagt ggggtattttg 360
aaggatgcga gttcctccac gtaccacgaa cccacaacga gccagctgat gccctggctc 420

caataagct

429

<210> 290
<211> 448
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-F6

<400> 290

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agggccggac ctgatctggg ttgtgatttg gccagaaaag tgggaggctt ttaacggggc 120
ggatcttata tgggccatta ctaggaccgg aacatggcag gccattaatg gaccgtatca 180
attatggggc ggcatttggc ccaaaacatg gtagccagtt aatgggtcgg cctactaggg 240
tcctcaaaat cttttgggcc tatagctggg cgggccatt aatgtcggcg aaatctcatg 300
ggcctttagc tgggccggcc cgttatgatc cgcaagaatt ttgtgggcat ttacctgggc 360
cggcccatta tggcacacaa aaatcttgtg ggcctttacc tgggccggcc tattatggcc 420
cacgaaatct tgtgggcctt tagctggg 448

<210> 291
<211> 419
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-F7

<400> 291

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gctggcgag ggaactcctc gggcgattcg ccgctgctcc tgctgccgat gctggacgat 120
gacatctccc gtgaggcca gcgcctagat gctgatatgg accgattcat caggggccag 180
agtgagcgca tgaggcagtc tatattggag aaagttcagg caaagcagtt tgaagcgctg 240
gcctctgttg aagacaagat cctccgaaaa atacgcgata aagagtcaga agtgcagaac 300
atcaacaaaa ggaacctgga actcgaggac cagattaaac aaatggcagg ggaagttggt 360
gcgtggcagc aacgagctaa gtacaacgag agcatgatca gcgcactcaa gtacaacct 419

<210> 292
 <211> 414
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-006-Q1-E1-F9

 <400> 292

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 gttccagccg tcgctgatcg gcatggaggc tcttgggatc cagcagacca cctacaactc 120
 catcatgaag tgcgacgtgg atatcaggaa ggacctctac ggcaacattg tgctcagtgg 180
 agggacgacc atgttccccg gcatcgccga caggatgagc aaggagatca ccgccctcgc 240
 gccgagcagc atgaagatca aggtcgtggc gcctcccgag aggaagtata gtgtctggat 300
 cgggtggctcc atcctcgcct cctcagcac attccagcag atgtggatat ccaagggaga 360
 gtacgacgaa tctggcccct ccatcgtcca ccgcaagtgc ttctaagcct tggg 414

<210> 293
 <211> 428
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-006-Q1-E1-G11

 <400> 293

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 gattgcgaaa tcattggtat acacttttta ccggaagtgt ctcttctgct ctcaagctca 120
 aatgctccct gatgaacagt aaaataaaaa tagtaaaaaa tacaaaaaaa tgtaaagtgt 180
 ttttgtggta aattttgacg aatgttttat gcgcttgata aatttcagca tgaaaggaca 240
 ttcgtggaca ccatggaaaa aaagaatcaa cgctccaaaa tgctttcaaa actagcattt 300
 ttggagcatc gtttgttttc acgacttcca tgaatgttat ttcttgataa atatttgcaa 360
 gccacaaga cacttgagaa tgtttaccac aaaaatattc agattttttt caatttaagt 420
 atcaattt 428

<210> 294
 <211> 398
 <212> DNA
 <213> *Triticum aestivum*

<223> Clone ID: LIB103-006-Q1-E1-G12

<400> 294

gggtcgacg gcatacatga tcttagtgca taaactgtat caagatatct gttggtactt 60
ggtactggta gcaatagaga ctctcccctc cctcctcat agctatttct tcagttatgt 120
*tcgaatgcg taatgtcgtc gtagccacta tctgttcaaa aaactagcgc ttcttgatgc 180
acaaattaat accttattgg tatgcatcga ccgatggtcg tgtgtttgat atggggatcg 240
tgtgttggtg gtcggcgatc gaactacatg attttggatc aacaagtaaa ccaacactag 300
tcttgatgt atgtccatgt tgctagaaaa aaaacaatat aaaaaaaaaa tataacaata 360
acaaataaaa aatataaaac caaaagaatc aatactac 398

<210> 295

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-G6

<400> 295

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agaagaccgc ctccaaggag ggcgggcgcg agaagagggg ccggaagaag ggcaagaaga 120
gcggtggagac ctacaagatc tacatcttca aggtgctgaa gcaggtgcac cccgacatcg 180
gcatctctc caaggccatg tccatcatga actccttcat caacgacatc ttogagaagc 240
tcgcggcgga ggccgccaag ctgcgccgct acaacaagaa gccaccatc acctcccg 300
agatccagac ctccgtccgc ctgctcctcc ctggggagct cgccaagcac gccgtctccg 360
agggcaccaa ggcagtcacc aagttcacct cctcttagat tccattgect gtatctaaat 420
agctgttcgc cctggt 436

<210> 296

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-G7

<400> 296

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 ggggtctcggc taatggccgt gtgggtgccca ctgctgctgt gtactctgca gcaatccttg 120
 agtaccttac tgccgaggtc cttgagctgg ccggcaacgc tagcaaggat ctcaaggtga 180
 agcgtatcac ccctcgccac ctgcagcttg cgatccgtgg agatgaggag ctggacaccc 240
 tcatcaaggg caccatcgct ggtgggtgggtg tcatccctca catccacaag tcaatcatca 300
 acaagacctc caaggagtga atgaaatgca ataacgggta gttgttgtgt gttgtatctt 360
 cgtgatccct tgttatgttg tgctatctgt tacgtgttgc tattatcaca acctgaatag 420
 gttgtctgaa tttgtg 436

<210> 297
 <211> 354
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-H10

<400> 297

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 agcaaatgat gagtgaacag gtgcaagatg tggtaaacag atttgaagag gccatggaga 120
 agatagatgg catggagaag acgttcgaaa caaagctcga taacaaattt aatgaattgc 180
 tcgcgcgtct tccaccacca ccacaggctg ccctaacgc accactccaa caacaacaag 240
 aacaacaaga acaacaacaa caacaacgcc gctttccaaa tcaagtggga cgagcacatc 300
 gcgttcccat tgaccctaag caaacttctg gtgtcgctgt tgatgcctct aacg 354

<210> 298
 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-H3

<400> 298

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 tgggtgcctt ctttatatga tgggacgttt cgggcatgtc catggacacg tgctagccca 120
 cgaccacagt cttgcatgcy ccacgtata cgcgaccca ctcgtcagct aacggtcaaa 180

ggcattgacc caacggcaac gtccgttata acctcttatg agggtttcgg gcaagggagt 240
 ggggaaaagt gagcaaaagt taacagagtg gggatgaatg agtagagcta aggaaccagg 300
 ggcacagaaa taaaaatccc tagaaaataa cgatacccg cgcgagcctc aatgttcatt 360
 ggaccacata catcagtatg tatgatttcc aataaatatg tttctcgctc cattgttccg 420
 gagaac 426

<210> 299
 <211> 323
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-H4

<400> 299

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 ctccaacaa tatgacatga gcattccatt tcatattgct tagcatgac gtaagaaagc 120
 tagcatgatg ttttcatggc ttgtccgctt cttgatgtca ttgctacgct agatcatagc 180
 acatcctggg acaccgccgg aagcattcat atagagtcac atctttgttc tagtatcgag 240
 ttgtaatat gagttgtaag taaataacag tgtgatgac atcattatag agcattgccc 300
 cataaaaaaa gaaacatcat att 323

<210> 300
 <211> 375
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-H5

<400> 300

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 gggctctgtc ctcatcctcc tctcccggtg tttccgaag cctccgca cgacgcgact 120
 cgcgccccga gattttgaac gaagaaagga agttgaacca tggggaagag aaagtcagct 180
 gctaagccac cccctatgaa gcggatggac gagctcgaca cagtcttttc ctgcccgttc 240
 tgcaatcatg ggagcagtgt ttaatgccga attgatgtca agaacttgaa tggttaggct 300
 aaatgtccaa tctggcagga aagcgtcagc acttccgtta aagcccttac tgaacctatt 360

gataaaactgg gccaa

375

<210> 301
<211> 436
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-H7

<400> 301

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gtggacgaca ctgaatgcat gcgagatccg ctgcggcgaa tggtgcctt gacggttggt 120
ggtgtggatt aggtgccggc gccggccgcg agtgcagacg cacagatctg ctcgagcgtg 180
gtgtggttgg cagaaggaag aactcgtcgc cgccctcgca ggtctccacg ggaaggccag 240
cccacatgct ccgcggtggt taaagagaac ggctgcttct tcagtgccca ggcttgaaag 300
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gtggatcagg ttctcgattt ctgtccggtc tgtgggtcac aaatgtcgat gactccatgg 420
attcaatgca aggtga 436

<210> 302
<211> 417
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-A12

<400> 302

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cggaacagta tccagttggg cgcgtttgac attcgcggga aaatatgctc cgcccaggta 120
gacgtgctct cctctcgta gtaaacaag ccttgagcaa tctttgatca aacttaaaca 180
cctgtctcct actccctccg ttcggaatta cttgtcgcga aagtagatat atctaaacat 240
attttaggtc gagatacatc catttccaat acacatgatt ttcagaggac ggagtatttg 300
tgaatgcacg gtggagtagc atgtgtataa ttcataaagg actgaggtac cggggcattt 360
tcaaaagcta acatcagcgg caaacggtat catcgaaatt cattggtttc ggtttgt 417

<210> 303
 <211> 259
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-A4

<400> 303

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 gcaacgatgg caggacgttg cgatcagctt agtgatgcac aacgggatcg atgctgacgt 120
 caacatcact agttcacagc gatatgatac ctcggatcac gtaccaggat gcaatctaga 180
 ctgggcaaag cccaccatcg cccgcctgat cgtccaaacg tgcactagcg tcattctgcac 240
 acctcaggca acctcttca 259

<210> 304
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-A5

<400> 304

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 caccatcctc aagactactc tggttgagct cgggaggacg ctgggtctgc aggaatgtgc 180
 tttctggatg ccgtcgagga gcggttcgag ccttgagcta actcatacca tgcgccacca 240
 catccccacg ggctcttctg tggagattaa tctccctgtt gtcaaccaag tcttcagtac 300
 caaccgggct attatagtgc cacatacatc tccttttgcg aggatccacc ctgttcaagg 360
 ggggcatgtc ccacccgagg tggctgctgt gagagtcccg ttgctgcac ttccaaactt 420
 tcattctgag cttt 434

<210> 305
 <211> 466
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-A6

<400> 305

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ccaaaacaag ggcaaaagag tttggaaaag tagatacgat ggagacatat caatagtcac 120

attgcttacc accaacatct tattttgatt aggcgggtatt gtgggatgaa gcggcccga 180

gcaaccttac atgtccacgc acatgagacc ggttccaccg actgacatgc aacttgtttt 240

gcataaaggt ggctggcggg tgtctgtttc tcctacttta gttgaatcga atttgactat 300

gaccggtcct tgaagaaggt taaaatagca aacttgataa tcgttggtgt ggtttttgcg 360

tagttaagga cggttcttgc tagaagcccc tagcagccac gtaaaatttg gaacaacaaa 420

gtagaggacg tctaacttgt ttttgcangg catgttgtga tgtgat 466

<210> 306

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-A7

<400> 306

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cgctggccaa acagcgtgag gaaataaagc gcatgactgc tgagtttgat gcgagcatgc 120

tggagatccg caagaatttg gatgctatgg atgaaattga gaggcggagt gcggaggact 180

atgagaagtt ccgtaagaag ctaaacaata ttgagaaagc atgcaatgtt gctttgatcg 240

tgctggtgcc tagcactgtt ctgcttttta tgtcactgta gtatcatctc tattagttgg 300

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<210> 307

<211> 405

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-007-Q1-E1-A9

<400> 307

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ctggggaccg ccaagtcgcg agttcatacc tcgaaggcat cattctggca aaccagata 120
agaataactt ccttgtgect taatttcccg agtaattcat cccctaaccg ccccgtaaca 180
tatgatttct tagatttcga tcgttctttt ttctaacatt tcgtgttctg tgcagtgaca 240
cacattgcac actcatcctc ttaagcccg aatattccat ggccacgtat ttcgacccga 300
accgtgactc caagatagac tacacanata tcaagaaagt tcttgatgat gttctccccg 360
gctacgcaa atctggagge accttcacca ggccagttcg taggt 405

<210> 308
<211> 432
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-B10

<400> 308

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gggcgaaggg gttcggagga atttctaaat ttttgcccg gactatatat agcccgaccc 120
tgtcgggtgtg accgagtga acaactcggg ggcaccgaga tgcataacta tggtacaatt 180
gtgggaggcc tggacactat tccaatgagt gtacgacacc ctacaaaaga agagaagatt 240
ctccaagaag aagaagtaa agagaagaat caccaccaag agagaggagg agtagagatg 300
atcgttatga acgaagaccc tcacggagaa gcaaggattc ggaaaggaag gacaagtcac 360
caaggagctg cacaaaacga agacatcaag ctcatgttgg tgaatgggta tccggctccg 420
actccgacaa tc 432

<210> 309
<211> 354
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-B6

<400> 309

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atgccgacct ccaggactag agatcaaccg agtaccgcgt atgattattg gttcttttct 120

tatgttaatt tgattgtgta gtgctcttct gtctttcttg gtgggtgctg ttgttgagga 180
acagaaaact catggaaggg tggttgttgg tgagatagct tggataaacc tctggcacia 240
ttgctgtgtg caagcaacgc cctgttgcgt tctactggta gtgggtgtgtg ttgtctgggtg 300
tccattgtct aactatcatg tccaaatcta atgtaatttg aagttgcttg tgtc 354

<210> 310
<211> 417
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-007-Q1-E1-B7
<400> 310

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atctctctga ccatgaggac aggctctctg ttattgaaca gaagatcgct gtgctcctgc 120
ctctgcataa aaaatatgct gagttgaaat ctcagtttga actcaaataca tatgatctgt 180
cattatttca aagcagagtt gaacaaaatg aacatcacia gttagggtgaa cttgtgaaga 240
aacttgagca agaactccag gaatcaaaag aagaattgaa ggaaaaaaca gtggagcata 300
aaaaatgtgt ctccactggt tctgatttgg aaaagacaat taagacttat ggcagtgaac 360
gtgaaggtag gctcaaagct ctagaaaaaa agataaagtc actgaaatcg gaaatgc 417

<210> 311
<211> 417
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-007-Q1-E1-B8
<400> 311

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gtgcttttct cgcccttaga aggagcttgc ttgcagcctg gctgtttctat gtcgtatgct 120
accttttagaa ctagagtaaa atgtaagaag tgaaagaact tgtgaggcta tggttctgtg 180
ccataacctg aggggggtctg gaggtgaaag aacatcgag tactgttgat gtcgtgactg 240
aagtatcatc cattgcctaa tatatcatgc cttgttgtgt tcctagtga aaaaagaaaa 300
aaaaaggaaa aaaaaaaggc aaaaaaaca aacaaaaaaa gaaagaaacc aaaaaaaaa 360

aaaagaaaaa gcaacggaaa gaaaaggatg aagaaaaatg acacagggca taagggg 417

<210> 312
<211> 382
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-C2

<400> 312

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tcacttcaca tcgtgatgtt gtgttacctt ctattttcat gtcgtcgtcg cgctgcctgc 120
gattacggac agcgctccct gttgggtccg cagtccgtcg agcagcagca cgggtcaggc 180
cctacccttg gatctgacgg cgctgctgac tctacaggcc taggctcagg cccatctgag 240
aagacaggcg atcgtgggtga cgtcatagac gctgatttta ccgacagcaa ctgaatacaa 300
cactacgtta ggacatgatg aacaagtgag tatgagtttg ttccacatta ttgcctagta 360
gtataaccggg tgaccgcttt ct 382

<210> 313
<211> 417
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-C6

<400> 313

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tgtcaaggag aaggtggagg ggaagctcaa ggaactccag gtcgccgttg ctggtggatc 120
gacacagacg ataaaggatg cactagctgc gttgaaccaa gaagtgatgc agcttggtca 180
gtccctctac cagcagcagg ggtcaggccc tacccttgga gctgacggcg ctgctgactc 240
tacaggccca ggcccaggcc catctgagaa gacaggcgat ggtggtgacg tcatagacgc 300
tgattttacc gacagcaatt gaatagaaca gtaggttagg acatgatgaa caagtgagta 360
tgaatttggt ccacatgatt gcctagtagt atacggggtg accgctttct ttggatc 417

<210> 314
<211> 441
<212> DNA

<400> 316

gggtcgacgg gcgagctcat gtaggaagaa gacgacgca gctctggagg aggaagacga 60

ctcaaatttc aaatcgaggg attcgttgga agccacacag ggcacctgag aaggagagga 120

ggagaatgct ctgaagagaa gaaatgatag gttttattgt tttgttttaa gagcaagggg 180

gttgatatgt agtcccctgg cttatttgta ttctactatg tgtatggcaa agaaatcatg 240

attttataca cacatatatt tttaaacaaa agcctatgta tttttttgct caaacacagt 300

catcggaaag cgcacatat ttcaatgcgt aaaaaaaaaa aaaaaaaaaa aaagcggccg 360

ctcaaaaagc tgccgctcta gatgatccat gcttac 396

<210> 317

<211> 456

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-D5

<400> 317

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tccaccccaa gattgcgcag ttcgctgagc ggaatccgga cgtgctgttc ctgcaagtca 120

actacgagaa gcacaagtcc atgtgctaca gcctccatgt ccatgtcctc cctttcttca 180

ggttctacag gggagctcag ggcaggggtca gcagcttcag ctgcaccaat gcaaccatca 240

agaagttcaa ggacgccctc gcaaagcact cgccggacag gtgcagcctc ggcccggcac 300

gggggctcga ggaggcggag ctcttggtc tggctgcaaa cagggaacctg gaattcacct 360

acaacgagaa gccgacgctg gtgccgatcg ccgaggccat ccaaatggaa gctgcctcca 420

ttggcgggccc atggatgcca ttgctgcgg gcgctc 456

<210> 318

<211> 412

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-007-Q1-E1-D7

<400> 318

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aacgagggcat cattttgggt ttggggacca gtggagatat acatacaaaa aattgtggac 120
gtaggttcga ccgaaaggca atgatgcatg ggcctgcat tttgatatac ccgctgccgt 180
gtgaaatttg ctactctact caaaactagt aaggtagaca tgcattaaat gcatgagatt 240
tggaaccaa attatgaata agtacacact atagcatgta aagctttgag tcatatatgt 300
atgatgtaga tgttcattta gttcttatag ttaataccat tcaaagtcaa ttagttttat 360
aaaaaggtta aaattcatgg cattgtgcat tgtaaagcat aaagtanaaa ac 412

<210> 319
<211> 465
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-D8

<400> 319

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tgaagagcgg caagtacacg ctcggtaca agaccgtcct caggaccctc aggaactcca 120
aggcaaagct tgtgatcctt gctaacaact gccctccgct ccgcaagtct gagattgagt 180
actatgctat gttggcgaag atcactgtcc accactacca tggaacaat gttgatttgg 240
gaactgcgtg tggtaaatac ttccgagtct gctgcctgag tatcatcgac cctggcgatt 300
ccgacatcat caacgcaaca ccggctggcc agtaaacctg tgtatgccat tttcagtgtc 360
tcgtctgatg cgcatcctaa ggtggttcta gagtgtagtt cttgctggac ttgatttggg 420
cttgtgtaca tcatttatca gtcaatcaag tttgatggga ctatg 465

<210> 320
<211> 414
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-E10

<400> 320

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cagaagaaag tcccggacaa gttgctggat gacaccagca tcacgcacct cttctcgatt 120

accaagtaca ccggtttgct tgccactggc ctcacagctg atgcgaggtc cttggtctcc 180
 caagcaagaa atgaagcagc tgagttccgt aaaaaatggg gatatgagat gcctgtggat 240
 gtattagcaa aatggatagc agacaaagca caaatatata cgcagcatgc gtacatgaga 300
 ccccttggtg ttgttgccat ggtcttgggt tacgatgaag agaaaaatgc tcagctcttc 360
 aagtgtgacc ccgcagggtca cttctttgga cacaaggcaa ctagtgccgg actg 414

<210> 321
 <211> 440
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-007-Q1-E1-E12
 <400> 321

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 gacataatcc atgactcacc tcgagtgcgc atgtacgaag aaagagaagc cgagctcgat 120
 cggcaggaca gcttggacgc attggaagag gagggcaatg tggcaaaggc tcgttccgca 180
 ttctatcaac agcaggctcg aagatatcaa agcagagaag tatgggccaa aacatataac 240
 gttggcgaac tagttctacg cctgccggac aagaaaatgg ataaattaaa gcccaaatgg 300
 gagggcccct tcatcatcga ccaagtactg accggcggag cgtaccgtct acgaggcgca 360
 tcggacaacc gactcgagcc gaacccatgg aatgcagcac gcctacgaag gttctacgcc 420
 tagcaccgga ctccgtgttc 440

<210> 322
 <211> 450
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-007-Q1-E1-E5
 <400> 322

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 tagatgacga tgatgatgag gaagacactg atgacgatga tgaggattcg gaggatgatg 120
 atgtgcgaga agagacagaa gaggaattcc ttgcaagata tgctgctgct ggcgagtcaa 180
 tcgaggttgt tgaggaagga gagatagatg aagaaacca agacattgaa ctgggttccc 240

tggacgaaat ggacatacaa caagtgggtc tttcactgat tcagaaacat actgcgctcc 300
 tccaagcgca ggttttgccca gatgacctaa ttgagagaat tgcagaaaca tttcccgaat 360
 atgagcagct gttgcatgct caccaactta ggtgttagac ttgtgcagat tttattttcc 420
 aaacatgttt tctgtgttag cttttgcggc 450

<210> 323
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-E6

<400> 323

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 gtgtgtggcc gcctgataag agtggccatc gcttgggtggg cgtgggtgctg gtagtagagt 120
 aggatagtgt tcttcgggac atgcttgtaa aattaagggtt tttgggtctt tttttccgct 180
 cctgtacaag tgtatttttg gatctgttgt tgtaattttc tttttctaata gacatgagca 240
 tatactttct gtcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaca atacgataca atcaaaagtt 360
 atcatatcat ccaaaataat gtcaaaaatc tgctagtcac gtaaatttaa ttc 413

<210> 324
 <211> 222
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-F3

<400> 324

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 tcgtcgccaa ggcaggctcta ggcgctccca gtatctatga atcctgatga aattgttcgc 120
 tcagcgacat ctcgctgcat gttgccgata tgctatctcc gtatcacaca gtaactctcg 180
 cgacaaatct gcgacctcct gagaatctca gtcgcttgag tc 222

<210> 325
 <211> 360
 <212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-007-Q1-E1-F4

<400> 325

agagatacag atggagggag agggaccaac aaggtttgtg tgtgggacgc gtgcgacaga 60

actgaagatt gtcagagaga gagagagaga gatcgaggga gacggagagg gaccaacctc 120

gtttgcgtgt tagacgcgtg cgacacaact gaacattatc agagacagag agagagagat 180

ggagggagac ggagatggac caacacggtc tgtgtgctgg atgcctgcga cagatccgaa 240

gattatcaca gacagagaga gagacaccga gagagggacc cacctcgtct gtgtgttgga 300

tgcgtgcgac ctaaccgacg attgtcacag agatagagag agagatagac agagagagat 360

<210> 326

<211> 457

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-007-Q1-E1-F5

<400> 326

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gagaggtcat caggcagatc tcttgatgtt ccccatgacg ctgtctgcct cccttccttg 120

cagattttctc tgtagccatg aacttttaaac tgaatggcat caacatgttc aaaggcttca 180

gaggctttca cttgctggac gaacaggaac tgacttcggg agaatttata tgatgctata 240

agaattctgc aaatgaatgc agactatgag aaccaaagga ttctcccacg gacatgtacc 300

tgtgacagca ttaatgtgcg agggaagggg aagaggtcat atgcattccc agaatatttt 360

gaagataaat cagtttagaa gacattgacc tcatcgtgcg aagacattca ctcatagata 420

aggagttggt tccagatctg tacgaatcca gagatca 457

<210> 327

<211> 395

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-007-Q1-E1-F8

<400> 327

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gaactcaatg gtacgatgct ggaggtggaa gacgtggcca acatggcgct gtatgtcgag 120
tcggacgagg ctaggtagct ctcaaactgc gcagagtcaa gattgatgct atggtaccat 180
taatgattcc agctgaagat atttgcaacc tgaagtgtta cacaagttta ctattgtgcc 240
aatgtgtcat catgtgtttc catgattttt gcaaaccctt aatatatccc cgggttcctt 300
ttcttctatg ctagaattgg tttggaaaaa ctgtatgcaa ctatggccat gaaattgtat 360
taagaattat gcaaggagtg agtcatcatt tcttg 395

<210> 328
<211> 357
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-007-Q1-E1-G1

<400> 328

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gtgttttctt taccaaggtt ggggttccgg cgctcaaggg caacatttat atggagtagt 120
gggagttgtt nagacaagcc ggccggggtc aaaccgaatg ctgcctccc agtgaacctg 180
cgcatccgac tgctcgcatg cctaccaaag ttccacacaa ctactcgac gcctcctgat 240
gacactgcgc agcgagcaac cctccgttaa atcacacacc tgcacgcacg cctccccgtc 300
tgctgcgcg gcggactgct ancatgctga tacgtcccaa catatctata atttttg 357

<210> 329
<211> 209
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-G3

<400> 329

ggagcacaat gatagactgc cagtacaagg agggcattga tggagaagat caaggacaag 60
atcagcggcg acggccacgg cgacggcaag aacgactgcg accattttatt ctttttcttc 120
cttattatct aaagtcgccg ctctacagga tccatgctta cgtttccgtg catgcgattt 180
catacctctt ctattgtgtt acctaaatt 209

<210> 330
 <211> 465
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-G7

<400> 330

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 ggggtagagt gctggatggg tgatggagtt gcttctcgaa gatgggtggga gatgcctact 120
 agacaaaactt agggtagaac ttcaatatta tcaataagag tgggggatgtg tttccgtgtg 180
 tgcgtgtgcy tgatagatgt gtcgggacgc atgcatggat gatgaagggg aaccatgtgt 240
 ttggtaagca aatctaacta gatcggtaga tcaattgttg tttatcggag gaaggaagag 300
 acataactaa taggtagatc gatcgacgcg ttgggaaaaa cgagttataa cgacctagct 360
 agccatatgt atagcgggag atcggtcggt gtacatccat ttgttagagg caaacaaggc 420
 ccagtgagat ggatagacag agagaatgga gcctagaggt ggtgc 465

<210> 331
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-008-Q1-E1-A10

<400> 331

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 ggagaagcga gggttgggta gagaggaagc tgagagagaa aagtgaatg atggttgctt 120
 cgtccgtcca acttactgct ggaaaggagg gggttctgtg atttgacggc tcattggaca 180
 ttactgcggc gcttcgatcg gggtagtccg cgtcactct actacggagt aatttaatgc 240
 atggctggtg gaccccgatg ctggctatcc cacacgtcgg cgaaagtgag taatttagtg 300
 catggctgaa ggaggatccg cacggtangg cgtgtccact gtttttctga agaaaaaaaa 360
 tgattacagc aagcgtttcc actcttacga cggaggagtg cgaaacacgg cagccacttg 420
 aacatacaca gtgctcctac tac 443

<210> 332
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A11

<400> 332

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ctctgcctac gacgacgacg atgtttcgtc ccttttatgc attttcagtg actcgtttta 120
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaggtaaa aaaaaaaaaa aaaaaaaaaa 180
aaaaaaaaag gggcgggcca aaaggatcaa agctaaggta agcgtgaagg caacttaaaa 240
gatcttcaaa agggtaacca aaattaaatt aacggggcgt cgttttaaaaa gttcgtaacg 300
ggaaaaaccc tgggggttaac aaatttaaac cccttagaaa aaaaaccctt ttccgcaact 360
gggggaataa ccaaaaaggc cggaacggat ggcctttcca aaaatttgga aac 413
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<210> 333
 <211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A12

<400> 333

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tggggatgga cggcgccggc agcgccacc atgccagatt gttccagaga cttccttttg 180
taattgctca gcaatgaggt tgtgggagat aaggatgaac gaggcaaggc cttatctgta 240
aatgtggaga gaggagcggg tatcttttgt aaatttgtca tagtttgctt tctatccgtc 300
agatatagat cggacaatct atattataag atggcaggcg caccatcatc accaactcgg 360
ttttttctct actcctactc ctataaaaga ctcagttggt gatgatggtg tgtctgccat 420
ccg 423
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<210> 334
 <211> 356
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A6

<400> 334

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cccccccagg tgcgcattga tgtccatctc ctgacacgga tatggaggag cctcttaatt 120

gccggtagag cagttcctga tatatatcct acatggtagt tgccaactta tcagccattt 180

caaggtatac catatcctgc agacagacga tttgctgctc ctgtttgtgc atgcgtacat 240

gtgcgtatgt atggttctct gaacactctg tatgatatcc taatctatct aattgtccag 300

cgtttgctg tgcaaactc aagcgttgag ttccatcaga atatgcacgt gaattg 356

<210> 335

<211> 387

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A8

<400> 335

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ctgggctcat acgtggctgt gtcacgtcgt agtgacgtta ctatcctacg cctattttaga 120

gcagtgggaa tcgggccgat ggattgtccg ataaatgggt acacagtcac ttccatctcc 180

gaaacacttg gtttcgggca tccgacgtgg gagtggacat tttgctgctt ctttcgaagt 240

ttgggacaat catcatccac gtttacccta gatactacat tcgaatccat tttgtattcc 300

tatacgactc tttatcaatc attctatgtg tatttatata tcttcacaat gatgacagcg 360

atgtactcca ctgtcatata tgaatat 387

<210> 336

<211> 415

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A9

<400> 336

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tcctcgccgt cgagctcacc ggacaccgcc cgaagccaag atgactactt ccaggcgcct 120
 tgctgacagg aagacatcga agttccagaa gaacatcacc aagagggggt cgggtgcctga 180
 aaccactgtg aagaagggga atgactatcc tgttggaact atagtgttg gattcttcat 240
 ctttgtgggtc atcggatcat ctctgtttca gataatcagg acagcgagca gtgggtgggat 300
 ggctgaaca ctgtcatata ttaatacagt tgcagctaaa tctgtttgat gtcgtcatag 360
 tttgtcttct taaaagtacc tagtttgaac tgatgttggt agaactgtta acaga 415

<210> 337
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-B10

<400> 337

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 cagtacgtca tgcataactc atcgattagc cggccacata ccatgcatgg agtaaacaaa 180
 agagaatgtg ctcaagacag aaacactcac ccaaaatggt aaggaaatag aatatcactt 240
 ttgagttcct gctttgtaag aaactgccac aggtctgcct ccatgtcggc ggggtgatgc 300
 tccaacacat atccattaac gatgtgtggg tcaatgaacc caacatcatg gatgttcctt 360
 actctgcatt ccttaatctt cattctgcat gtataatagc ggacacaaca atatagttag 420
 gacatatata tagtgc 436

<210> 338
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-B12

<400> 338

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 gtgaggagaa tggcgaggat gatgaggaag aacaagagga gcaggagggt ggaggaggcg 180

acgatgatga cgacgacgac gacgatgaca atgaggagga cgacgatgat gacgatgatg 240
 tcgctgctga agacgatgaa gatggagtag aagaggagga tgacgaccag gacaacgacg 300
 atgatgagga ggaggacgac gaggactcgc tccagcccc caagaagagg aagaagtgaa 360
 gcccttcgat gccggctgct ttagtcacca tgcgatgaga tgtg 404

<210> 339
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-008-Q1-E1-B3
 <400> 339

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 gtccatgaaa cgggagtggg tgtacgggac gttccgacag ttgaatatat gaggacgtta 120
 ctacgagatt tactacaata taaatcatga cggctataac atagattaaa ctaatcatgc 180
 ggactagcat agtagatgaa cacatcaaat ctaggacaca gactatacac atgaattcta 240
 ccacgatttc gaacaggaag gacagacaca cataccgtgc aacaggagca gcaccattgg 300
 cgttgaggtt gtcgcccattg ccgttgagga agagggtgcc gacgtctggg aagaagtcgt 360
 cgttggtgaa gtcgtcgtg ctagcactcg caagagtgca ct 402

<210> 340
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-008-Q1-E1-B4
 <400> 340

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 gacgtattga acagggggta attaaaactg gtgacgatgt tgaagtcata tgtttgactg 120
 agagtgggtcc tgtgaagact acagttactg gtgttgagat gttcataaag atgatggatc 180
 atggagatgc tggtgacaat gttggtcttc ttctccgtgg tcttaatcgt agtgatgtca 240
 atcgtggcca gatggtttgc aaaaccggta ctgtgaagac ctacagaaag tttgaagcgg 300
 aaatttacgt cttaccaag gatgaacgtg gtcgccacac tgcattcttc tcgaattaca 360

gcccacagtt ctacttcacg acagctgata tctgtgggaa aa

402

<210> 341

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-B6

<400> 341

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cttttaggca ttataaaaac tttcatataa gtgcattgaa tactaagaga agtttgatac 120

ttgataattg ttttgagata tggagatggg gatattagag tcatgctagt tgagtagttg 180

tgaatttgag aaataacttg gttgaagttt gtgattcccg tagcatgcac gtatggtgaa 240

ctgttatgtg atgaagtcgg agcatgattt atttattgat tgccttcctt atgagtggcg 300

gtcggggatg agcgattgtc ttttcctacc aatctatccc cctaggagca tgatgcacgt 360

agtactttct ttcaataact aatagatttt tgcaataagt atgtgaattc tttatgacta 420

atgttgagtc aatgg 435

<210> 342

<211> 405

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-008-Q1-E1-B8

<400> 342

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cagcgagcgt gtcgtgcagg tcagccgagt caccaaggtc gtcaagggtg ggaggcagct 120

ctcctaccgc gccctagtcg tggtcggcga catgaaggga cacgttggtg ttggcgctcg 180

caaggccaaa gaagtctcag aggccatcac caaggctgcc atgaacggcc gccgcaatct 240

cgttacagtg ccactaacca agtactgcac cttcccgcac agagctgagg cgaactatgg 300

agcagcgaag gtcattgctg ggccctgctt ccctggatct ggtgtcactg cangtggagc 360

tgtgaggggt gtgctggaga tggctggagt aganaatgct cttgg 405

<210> 343
 <211> 409
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-008-Q1-E1-B9

<400> 343

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 ctcatgccaa atacatggca cccccgacaa gccagccaag cacaccaaca gggaatgttg 120
 gatgttcaag caggccggca agttaagcgc cgaagacaaa gataaggggc tacatagcga 180
 tgacgaggag gagccccggc agccgaacac ccgagggcag aagaggttcc cccaacaagt 240
 gcggacggtg aacatgatat acgcaaccca catccctaag agggagcggg agcgtgcgtt 300
 aagggatgta tacgtgttg agccagtcgc cccaaagtcc aacctatggt cctcctgtcc 360
 gatcaccttc aatcgtangg accatccac tagtatccgt catggcgga 409

<210> 344
 <211> 453
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-008-Q1-E1-C10

<400> 344

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 gtaaagcggg gatacattcc tgcaggcaaa acaatcatgc cacctttctt aactgctata 180
 cggatccact gttcgttttg gtccctcaca tcaaagtatc cactgccctc gagacaatag 240
 cgtatctctt catcagtatg caagtgtct tcaaagaagt tcttcagctt ggccctcatag 300
 tttggcaact tctctgggca tacgtcgcaa atgtccacat aagagtatcc cctggcctca 360
 cggattttct tgagattctc gtctttctcc cagtcatcag cattcagggt ccagcttaca 420
 acaccaatt ctgaaagttt ggcaagagga atg 453

<210> 345
 <211> 439

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-C12

 <400> 345

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 gccggcggtc aggggaagac gaggggcagg aagaagggca gcaaggccaa gaagagcgtg 120
 gagacgtaca agatctacat cttcaaggtg ctgaagcagg tgcacccaga cgtgggcatc 180
 tcttccaagg ccatgtccat catgaactcc ttcattcaacg acatcttcga gaagctcgcc 240
 ggggagtcgg ccaagctcgc ccgctacaac aagaagccca ccatcacgtc ccgggagatc 300
 cagacctctg tgcgcctcgt cctccccggg gagctcgcca agcacgccgt ctccgagggc 360
 accaaggccg tcaccaagtt cacctcctcc tagacaactt aggcttgatc ctcgctcgctt 420
 catgcgttct gtaagtacg 439

<210> 346
 <211> 391
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-C5

 <400> 346

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 cccctggatc gtcttttagg ttttaaaaaa ataaaaggaa atgataaaag attaaaaaaa 120
 ttcaaaaaaa tagatgccca tgtgttatgt gtcctatattg ttaggaaaat taacaaacat 180
 gaattttgaa tttttttgca aaaggccgcg tgtttcggtg aaatggccgt aacttttgca 240
 tacgacctcc gatgaaaaag tttttttata tgaaaaatca tctacttgaa aagttacatc 300
 caaattcaat tagggggaca ctatgggaga tttttagaat cccctaaaac ctgacagaat 360
 aaaagatacg gggcttttaa gatctggagg c 391

<210> 347
 <211> 425
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-C7

<400> 347

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tatatgatac ctgggcccct ggggggggag atgtaagaaa aattaccaat ttgaccctta 120
gtcccagtgt tatatttggt tatttactaa aatctccttt tgggtggagaa ggggtggattg 180
ttagtgtaga tgatttagaa gatataattg gtgggcatgt atggttgggt tttatttgtg 240
tatttggcgg aatttggcat attttaacca aacccttcgc atgggctcgc cgtgcatttg 300
tatggctcgg agaagcttac ttgtcttata gtttagctgc tttatctgtc tttggtttta 360
tcgcttggtg ttttgtatgg ttcaataata cagcttatcc gagtgagttt tatggacca 420
ccggg 425

<210> 348

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-C9

<400> 348

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ccaacgagaa gcagttgatt gatcactatg gatcaaagca tccaaggag aaacctccag 180
gtccatcaaa tgcagagtga ctgatgcgag gcggaagcat gagctatact ttgactgttt 240
ctgaggggtt ttcaatctgc tccacactcg gacgacttga gcctcagctt taccctatgt 300
aatgcatgca tttccccttg ttccaggcaa gaaccttgat gagcatgtat ttgccttata 360
tgagtatctt gtcaaactgt cagcatacct tcaaactgta t 401

<210> 349

<211> 397

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-008-Q1-E1-D1

<400> 349

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atgttgagca gcagaatgcc caaggtgcat atagttctac agaagaggtg aaggaggaag 120
taaagtgcatt caaagccatt atagagaggc tgatacagag ggaaggccat cttgtagtca 180
tagacgaagg aacagcggca gcagaaggtg ctgcagcaag ggcacggag cacagaatcc 240
tggctgttaa cccgaactac gtcattgatt gattaaccag ctgaggacac agctaactag 300
atccatcata tgtggttgac caatagagca gacattcaaa cggaagacat cctgttgatca 360
tatgctctag aaacgatatg ttgtacctgc catcccc 397

<210> 350
<211> 449
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-D10

<400> 350

attcccgggt cgacggggaa tcagatggtg ttgttatgtg cccaccagat ggcaaacactc 60
gtgattgcga ggaagtgtt agtggcagtg atcatgatag ttctccagag ggccaagtaa 120
cttctgtaga accggccata gacggagaaa caggggaaga caagcttata aaccaagatt 180
cactgaagtt gatcgatcaa gaaatgtctg ctcttcctaa gtcaccaaca aagcctagta 240
tgtctggatc agagaagtct aagcgtactg ttcctcaacc attcacactt tcaactcaaa 300
gaagggctctc tgggtggagga aatggtggtg ttgctcatcc atccagtaat ggagaaaaat 360
ctgggcaagg aagtagtgcc tctccagcaa gcatgataaa gaagagtact ctggtgacac 420
ccaagaagat gtcacaacct ggccttaca 449

<210> 351
<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-D11

<400> 351

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tcgcatacaa cgcgtcctc caggetcacg cgagatcga caccgccacc cggaagccca 120

gcctcctcgc catcctcgca aggcacttct tcccacagct gtcggccaac gtcggggcgg 180
 ggggtgcagct ggagaggggc aacatcttca ggtacacctt cggggccaag aaggccgtct 240
 cattcacga cgacggcctc ctgggcctca acatcaaggg acgcctcctc gcagacaaga 300
 acttcaagcc gaggaggaag agcggcgccg tcgagctcgc ctggaccata ctgcattca 360
 gaaggggcca ggacgtcagg atcaaggccg gatacgagct ctaccgaaag atgcc 415

<210> 352
 <211> 459
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-D12

<400> 352

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 ggacatgaag ctccagggatg accttgagag gctcaagaag atcaggaacc atcgtggtct 120
 gcgtcactac tgggggtgtgc gtgtccgagg tcagcacacc aagactaccg gcaggagagg 180
 aaagactgtt ggtgtctcca agaagcgata agctgcttca caaagattcc tcatagcttt 240
 gctactactg tggttggtcca tttccagaat cttaaggagg tggttcttatt tagatgatta 300
 ccttgatga tgttttgccc tagataatgt tttggttctg gaacctttaa tatattgtat 360
 cttgaattct ttgttgaact cgtacaagag tttgttttga taaaaaaaaa aaaaaaaaaa 420
 aaaaaaaaaa gcggccgctc taaaggatcc aagcttacg 459

<210> 353
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-D2

<400> 353

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 aatttgaatt gttcacctga aatggctaca atacatttca atgtcatata atgttcattc 120
 atatccgga aaaatccact tcgtttacga cacacatata gttgcatgtt cccccaaat 180
 ctaaggtcga gcacttcata catcatcgat tgccgctgtg accccatgat gtacctcata 240

gattgattag atttcatgct agatctcaac aatttactat cagcatcgtg tgacatgtgt 300
 tacagtgtat cttgggtgcat catcagtgtg tagtacgcat atagcctacg cgagacagtg 360
 cgtcggctac attccacatt cagcgtgtca agcacactat ctcg 404

<210> 354
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-008-Q1-E1-D5
 <400> 354

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 gtccaaggag gccggcgggc aggggaagca gcggggcagg aagaagggca gcaaggccaa 120
 gaagggcgtg gagacgtaca agatctacat cttcaagggtg ctcaagcagg tgcaccccgga 180
 cgtgggcatc tcctccaagg ccatgtccat catgaactcc ttcatacaacg acatcttcga 240
 gaagctcgcc ggcgagtcgg ccaagctggc gaggtacaac aagaagccca ccatcacgtc 300
 ccgggagatc cagacctcgg tccgcctcgt cctccccggc gagctcgcca agcacgccgt 360
 ctccgagggc accaaggccg tcaccaagtt cacctcatcc t 401

<210> 355
 <211> 400
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-008-Q1-E1-D6
 <400> 355

acggctctaga attcccgggc cgacggggga tttagtaa at caaatccatg gtttaataac 60
 gaaccgtgtt aacttaccat aacaacaact caattcctat cgaattccta tagtggaatt 120
 cctataggat agaacatata cagggtgtac gcattatata tgaatgaaac atattcatta 180
 acctaaagcat gccctcaatt ttctttaatg agttgatatt atattaattg aatatacctt 240
 ttgttttacg agatttttgc taaagtttca tttagccta attaacatcg agtagaccct 300
 gttattgtga gaattcttaa ttcaagagtt ataggaggagg acttatgtca ccacaaacag 360
 aaactaaagc aagtgttgga tttaaagctg gtgttaaaga 400

<210> 356
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-D7

<400> 356

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 tataatcttc cggtgatcac cacacgaggt aacaatgtgt atgggccaaa ccagttcccc 120
 gagaagctca tccccaaatt tgctctcctg gcaatgagag gcctgccact cccggtttat 180
 gggaatggct cgaatgccag gagctacttg tactgtgagg atgtgcgaga agcctttgat 240
 gttgttcttc acagatgaga gggtgggcat gtgtataaca tcgccgggcg taatgagagg 300
 ggagtgggtg atgtggccag ggacatatgt gagattcttg ggggtggacc tgagaaggcc 360
 atcaagtctg tggatgacag gccgttcaat gagcataggt actttgtgga cggtgagaag 420
 atgacgaggc tgggggt 436

<210> 357
 <211> 310
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-D9

<400> 357

cgggtcgacg ggtcaactca ttgggagagg gaaatctcca tcaacatgtt cacaagcaca 60
 atctaactcc aaaccctaatt tcaactcctg catccaattc ctgtctcaaa gttcgggaat 120
 ggtgctagta agttgctagt agacaccttg taattgggtgc tagttggttt aattggtgga 180
 agatcatatg ttcagatcct atatgcatat tattatccct ttgattatga acatgaatat 240
 gctttgtgag taaatacatt cgttcctgag gacaagagag aaatcttgcg atgagtagtc 300
 acgtgaaatt 310

<210> 358
 <211> 381
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-008-Q1-E1-E1

<400> 358

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tccccgcatac accacagctg ccgctgtgga gcctcgcgga cgcttgctat tactcctccc 120
tcgtctctgt ctggcgccc tctcgtgctc caccatgcag ccgctcttcc ctctctatt 180
ccctcctacc gtgggtccgg atcgggtgca ggccgtcata ctggagagca tgagcgtcaa 240
ggctcttaatg gtgggggtgga gatgcanggg aggtanggat gtcggatgga tctgacgcct 300
gctgggctaaa gcagcaggag ttggcagagc gacggatgcg gacggggtca tcaacagggg 360
ttgcaagaga aggagctcaa g 381

<210> 359
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-E12

<400> 359

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ggactcgacc cccgcgggag caacagctgt ccaagaatcc attccaccca ctgcgaagag 120
cgagcgagag agagaggaag cggaagcaag aagatggggc aggcgctgcg caggctcttc 180
gactccttcg tctccaccaa ggagatgagg gttgtgatgc ttggtttgga ttcagctggc 240
aaaacaacaa tcttgtatag gctgcacctg ggggagggtc ttcaaactgt gcctacagta 300
ggtttttaatg tcgagaaggt tcagtacaag aatgtggcat ttactgtgtg ggatgttggt 360
ggacaagaaa agctcagaca attatggacg atgtacctca gcaattctga tgcactgatc 420
caggttg 427

<210> 360
<211> 388
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-E2

<400> 360

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gtgaggagaa tggcgaggat gatgaggaag aacaagagga gcaggacggt ggaggaggtg 180
acgacgatga tgatgacgac gacaacgacg atgacaatga ggacgacgac gatgatgacg 240
atgatgtcgc tgctgaagac gatggacatg gagtataaga ggaggatgat gacgatgagg 300
atgatgagga cgatgaggac ttgctccagc ccccgaagaa caggaagaag tgaagccctt 360
cgacgcggct gctttagtca ccatgcga 388

<210> 361
<211> 429
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-008-Q1-E1-E5
<400> 361

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cgaactctgt cgagaagggc tacgattcga gctgcaagac atatgtctcg gttattgtcc 180
tcggagatga agcatgatat atttaccaaa agtactcttg ttcacttaca gctcgggtgga 240
gggctgacct ccttgccggc agtgccgtaa gaacgccctc cggggcaggg cccctgacg 300
aaggtttctt cctcgtttg gaaaccctcg tttccaagtc ttcagaggcg gtccttttcc 360
atccttgggg agagggaatt ttagattctt ctcccgaatt atcctccttc acgaagacac 420
taattcccc 429

<210> 362
<211> 389
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-008-Q1-E1-E6
<400> 362

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cccttcgatt ggcaaggctg ggggtctcct ctgtgcggtc aagagacaac atctggaagt 180
 ttttttcgtg gtccttgggg aaatcttagc ctcatgtta ctatcttcga tgttaaaaaa 240
 acagtgtgtt tggctcttgc ttaatgtgta tggcgcagcc catgatgagt ccatacatga 300
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 tgatttcaac atccttagac actagtggg 389

<210> 363
 <211> 410
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-E7

<400> 363

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 gcgcgtcact ccaatcacgc gttcataaaa tggcgcaggt ttccgattct ctgggtctggg 180
 agctcgtcag gaagaacaac tgcttcctga tcaagcagtt cggcaacagc aatgccaaagg 240
 tccagttcag caaggagccc aacaacctct acaatgtcca ctctacaag tactctggcc 300
 tggcaaacaa gaagactgtg acagtgcagc cagctgctga gaaggagatg actgtgggtcc 360
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<210> 364
 <211> 450
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-E8

<400> 364

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 cttaaataaa atcctggaca ggatatgtca gatacagagt actcccggga agcccgctaa 120
 ccataccac agagattgtt gggttttcaa acaatccggc atactcaatg ccgaacacaa 180
 ggggctcgac aactaagag aaggcgagga cgaaccccaa aagcagagca ccaggaaaca 240
 aaagaacttc ccacaagaag taaaaacagt gaacttactt cacataacaa aacgtgccgc 300

gcccataaag gtatgcaaca cacggtctat ccccaaagg tcccgccact ggttgtcaaa 360
 accaatcatc ttgatcagc tagattattc tagaaatatac aagaatgcag gctggactgc 420
 cttgatactt gatccaataa ttggcggact 450

<210> 365
 <211> 439
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-008-Q1-E1-E9
 <400> 365

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 cgaaggttcc ggcagagaaa gcegtgccca ccgctgtccc tccagccggt acctacgcgg 180
 cgaaggtggc ccaaacagca gcggccgaga agaagcctgc ggcgaccgag aagaagcctg 240
 tcgttgccaa cgggtgtgtc aagaccggtg tagctgcttg atcgcatacc cgatcctccc 300
 agctagccat gaagaacaaa cggacgggtgc tggcgaacca ggcgagacat gcgggggtccc 360
 aaggtactga tcaccaaagg tggctgtctg aaagcgggtc ggatagttag gtttccttag 420
 ctctcccctt tttcctcct 439

<210> 366
 <211> 345
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-008-Q1-E1-F6
 <400> 366

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 aggcagctgg tggccctgta ctaaggtgtc cgtttatatg ttggtctgca tatctatgca 180
 caatacgatt ggaatgaccg ggggttccact tcatagtttt ggatgaaaaa tggttggttt 240
 gggatatctg gcgtacagct gggcacatga tgagttccag aatgttatgt ttatgtattg 300
 gtgccagttt tggtgacgtt ctgttaattc cgttgcggtg atcga 345

<210> 367
 <211> 428
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-008-Q1-E1-F7

<400> 367

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 tcaatgtgtc gttggacaca ttgaaaacct ccatgacaac cgagggtcaag gacatgttta 120
 aggaattctt agaagggtt aaactttcca ccgcgccgt gaaagtgggt gatcccgcca 180
 acacggtgac ggatgctaac cccaaaaagg gggaagctac tagtgagaaa gctccgttgt 240
 ctagtggtaa aaatggcacc ggcattcttg cccatgtgga acctccaatt tatggagggc 300
 cgattccctc tactcattta aatcatgctg gtccctctcc taagtatgag aaacatgaag 360
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 ggagaatc 428

<210> 368
 <211> 400
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-F8

<400> 368

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 gagtccgtcc tcgagcagct gaagaaggag cttggggtca gctgaacggt tgccgtgctgg 180
 ctgcatacga cgggggcaac tgcggccacc ttgatcggtta ccaacccggt gttcatatgg 240
 aggtccgctg ttctcccga tcgatggcgg taatggtacg tactaccaga tgttgtaatt 300
 tagctggtat agctttccgg tggggcgacg gatccagcgt tttgcagaat gtttttgttc 360
 ttggttcgta gggctgcagt ttgttatgga cagagaagag 400

<210> 369

<211> 417
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-F9

 <400> 369

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 tagactgtat ttacatgtgt atattgtaac gttgtatacc acctcattat atatatatgt 180
 gataggccac ccctagaggg ttgtgccggt tcccccaaaa gcctattgtc ttacactggg 240
 caatgatggt gcctggcggt gacatggaag ctgcatatgt ttctgcctgg tcaggcagcc 300
 tagcatgaca actgtttggt tatagcctga aagctattag tactagaaaa aacaatttgt 360
 ggggtcatct accccactgt actttatagc ccaggcagcc accaggcggt tgaatac 417

<210> 370
 <211> 420
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-G11

 <400> 370

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 ttcagccttc cgtggagcaa ctcattegtt accttcagc tagtcggcaa ctattgctgt 180
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 atgttattaa tctgatggat gaactaacac tgaaaggaat cacacaatac tatgccttcg 300
 tagaagaaag gcaaaagggt cattgtctga acacgctttt ttcaaagctt caaataaatc 360
 agtctattat attctgcaac tctgttaata gagtcgagct actggcaaag aaaatcactg 420

<210> 371
 <211> 447
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-G6

<400> 371

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gatttgattg ccagagcctt aaaagggtcca cttgtacctg ctcaacagga gcaagttgtt 180
atagaattgg tgaaggactc taagctagtc tatcactgtg ggatgactcc acagaaactt 240
ccagaccttg ttgagcataa tccactcatt gctgtagagc ttctttcgaa gcttatgaac 300
tctcctgaca ttgcagggtta ttttgatgtt cttgtgcaca tggagatgag cctgcattcg 360
atggaagttg taaacagact tactactgcg gttgaactcc cgacaggatt tgtccacgaa 420
tacatctcaa attgtattca atcttgt 447

<210> 372

<211> 392

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-G7

<400> 372

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gagtacggtg gtccgaaatc agatgtgctc tgcccggtgta gcagttgtat gaattcagtt 120
acatgacccc agtcaattgt gcaaagtcac ctacacttgt atgggatgct ggtcacatat 180
actaggtggg ttcacatggt tgaagctgtg aacgtcaatg ttactaacta tgtggaagca 240
gcagatcacc atcttgatca gcctgatgct cagggtggaag aggaggagga cgaggaggtg 300
ctggcggcag agccagtgag ttgaccaac attgaaacaa ttogacgaaa tgcttgcaca 360
tttcgtgaag tttcacttgc agaaaaacaa tg 392

<210> 373

<211> 144

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-H10

<400> 373

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ttttaagaat cgaaggacaa gtgctcgatc tacatattca ccatagctaa ggttgattct 120
tcccttgcct ttgtggtaga tctt 144

<210> 374
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-H11

<400> 374

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gccctcctcc tccggcgggtg ctgccgtcgt gagcgagcat ggggaaggta gccagggtctc 120
tcctccgtca agtaggtgta agattaggtt taggactgag tctaggtttg tctctgtggc 180
gtttgacgtg atgtcgagtt ggagcttcgt ccaggcgtcc tcgagcagcg cctggcgggt 240
ggttctctcc cgaggtgagc ttccatgggtg gaagttgaca gcgggtggta gatctgggtga 300
tagcttcct aataagctcg aatctttccc tgatctggag gatctccgtc gccttggtcc 360
atgtgttcgt cgctgtcgtg gagatgggga cagaaag 397

<210> 375
<211> 432
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-H5

<400> 375

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ggatcaactg agtgagctcc ggtgggaagg taaatctggg gtcacatctc ggaggcatct 180
gaggggttta gaatagatga gatttaagaa tagagagggg gtctaaagag aaaacactac 240
ccatatgcac atgaggcaaa agcaaacaat tcacttcatt caatcaaaca agggcataca 300
atcgggtctaa ctatcgcaaa agtgctcgga ctactatatt tacatgggtg actactactg 360
ttgggggtgt ctactagaaa tattcttcgg ttgcagactc catgatatct gctccagctt 420
catcaacata at 432

<210> 376
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-H7

<400> 376

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gtatcagtat gttttcgtat tcgtttcggt catgcaatat gtgcaagtct tggagcgtct  120
tttgcattha gttttcactt ttcttttatg caccgtgctg gtatgagata gtccttggtt  180
gatttataga atgctcattg cacttcactt aaatcttttg agtgtggctt tatagaatgc  240
ttcatgtgct tcaattatat catttgaagt ctggattgct tgtttctctt tccatagaaa  300
actgccattt gtagaatgct cttttgcttc acttatatct gttagagcgt gggcatatct  360
tttgtagaaa taattaaact ctcttgcttc acttatatct attaagagag atgacacgaa  420
ttggccaatc                                     430
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<210> 377
 <211> 398
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-A2

<400> 377

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gggccagaat tcacgggtcg acggcaatag ataaatacca cacgtccatc aatttattha   60
ctaatttctg gaggtccata agtatacgtc tgatccatat tactacagac tgttctgttt  120
ttgacagatt ctgtttttcg tgtgttggtt gctactttg atgaatctat ggctactatc  180
gggggggatg aaccatagag aagttggaat atagtacgtc taacacttac aacttggaaat  240
gggttcatta cactgccttt aactggtgat ttgttttctt agacgtactg agctcatcag  300
atcttctgtt taagtgttgt gttgtgaagt tttcaagttt ttgggtaacg acttgacgga  360
ttttggaata tcaactggca ttcaccttaa cctgggga                                     398
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<210> 378
 <211> 352
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-A6

<400> 378

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cgtgaaatcc ttgctagttt atatctgatg tctgaactgc ggtacaaaga aatgaactca 120

tggattgtcg atgagctctga actcgtagag tatctgcatg tgcgaccggg attgcgtatg 180

aatgtacact tgatgcgcct gctaactgaa ttgctcgccc ttgtgagggt ggatagaggg 240

tacggaccga gtttgaagca gtccatggat tattttgtac tgtactacat gaattttacg 300

ccaatgtaat gtaaccaact taaacgggtc ggactttatt tgcctagcga aa 352

<210> 379

<211> 453

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-A8

<400> 379

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aggctttaag tttggaggag ctaccgaaac gtgctgtgat tcttgggtggc ggatatattg 120

ctgatgaatt tgcttctatc tggaaggggt tgggtgctga agtagatcta ttttatagga 180

aagaacttcc tctaaggggt tttgatgatg agatgagaac agttgttgca agtaaccttg 240

aaggaagggg aatccgattg catccaggga caaatttgac cgagttgagt aaaacagccg 300

atggcaatta aattgtgaca gataaagggg atgagctcat tgcaaagtgt ggtccttttg 360

ctacaagtcg tgcgccccaa ctcaaatagg ctgaacctgg aagctgttgg tggttaaggt 420

tgatcaaata agagccatca aagttgatga ata 453

<210> 380

<211> 399

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-B1

<400> 380

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 tggcggcggc gaactcctgc ggagctccat ctccggcgca tggcgtgacc taccggggtc 180
 ctggaaggca gcgcatggga ggcggcggac gggacagttc gggcaggagg tgtctgcgtg 240
 gctgcaggga agctggagga ggacgtgggt gtcggtgtca aaaccggcgg atctcgggta 300
 gggggtcccc aactgtgcgt ctaggccgga tggtaacagg aggcaaggga cacgaagttt 360
 taccaggtt cgggccctct cgatggaggt aaaacccta 399

<210> 381
 <211> 365
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-B2

<400> 381

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 gaaactagta ctactatggt gttgcaaaaa acaccaacac cggcacaaaa aaaagacgga 180
 cccccaaaag gttcaacctt acatacgact tgaagcgaag tccaaacccc tccaaaatgt 240
 ccccgaaaat caattcaaag gccggacgat taaaaggcc tcaatgggaa aaacctggga 300
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 aaggc 365

<210> 382
 <211> 394
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-B3

<400> 382

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 cgtgacgccg ccatgtcaag gcgctggatg ggatgattgg ctggaaacta attccggatg 120
 tctcttggtc tgcctgtggt accgactggt aactgcgcca acaatacggg cgccaagaac 180

ctgtacatca tctccttgaa tggcatcaag ggaaggctca accacctgcc gtccgcttgc 240
 ttcagccaca tggatcatggc caccatcaat aatgggaatc ccgacctcac gaataaggtc 300
 atgccagcgg tcatcgtgct ccagcgcagg ccatggcacc aaaaggacga tgtcctcatg 360
 tacttcgaat ataatgctgc gggatgattgt gaat 394

<210> 383
 <211> 357
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-B6
 <400> 383

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 cttttgacta atgttgagtc catggattat acgcagtctc acctttccgc ctttgctagc 180
 ctctttggta ccatgcattg cccttttctc ccttgagagt tgggtgcaaac ttcgccggtg 240
 catccaaacc gcgtgatacg atacactcta tcacacatat acctccttag atcttctca 300
 aaacagccac catacctacc tatcatggca ttttcatagc cattcggaga ttatatg 357

<210> 384
 <211> 437
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-B7
 <400> 384

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 tgtactcta catggcctct caccgctacc tttaccaaata cgtgttcaca cacttagctc 180
 acacacagta ggacatgttc acacgcctct gattcatccc cgatgaatca gacctgactc 240
 aactctaagc agtagcaggc atgacaaata agcatgaagc ggggggtgtac ttcttcatac 300
 atgtttccac cacttagcgt ctgcacacga catgtgctcg gcagacttca agcgaaagcc 360
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tattcggggtt ccatcca

437

<210> 385

<211> 421

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-B8

<400> 385

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gtacacgtta tgggtgccagt ttgcgtaagc agatcaagaa gatggagggtg tctcagcact 120

ccaagtactt ctgtgagttc tgcgggaagt ttgctgtgaa gaggaaagca gttggaattt 180

ggggatgcaa ggactgtggg aagggtgaagg ctggcggtgc ttacaccatg aacactgcca 240

gtgcagtcac tgtcaggagc accatccgtc gcttgaggga gcagactgaa gcataagttg 300

ctaacagcag tgttttgtcc taaggaatta tctgtttttt tgcagtttag acgatacttt 360

ggattcagtt ctgttggtg tttagtcaag ggtatctttg tacttggtgc catggatggt 420

t 421

<210> 386

<211> 256

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-C1

<400> 386

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cgctatgcaa acgtactctt tatggaaaca gacgaagagc tcgatgctct tccttgtcac 120

catccagcag catctgtcat atctctcact catgactatc ttcaagacat gtcaaatect 180

acaactcatt aatacctggt gtagcaccca tgccatacca tgttcaaatt caggataggc 240

aacgtgactc tcattc 256

<210> 387

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-C2

<400> 387

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gaagagaaag atggatcggg aagcagatgt tgtggcgcggtt ttggcatcgg aaatggatgt 180
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cccaccgggt ggtgcagatg caccgacgat cgaaattact gcaccggagc ctctgggtgg 360
cgaaattact gcaccggagc ctctcgcta ccccgaggac gatataaagg agatgaaaga 420
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<210> 388

<211> 451

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-C4

<400> 388

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ctccagtaat ttggggggccc gggacaaaat acaaaatggg gtcctaaatt tttttaaatt 300
catataacaa aagaagtatc caagaatat ctacactacc aaaataatac ctctctatcc 360
gaggaacgca tcatgcccaa agcatacata aatttgctcg attgcacaat atatgtggac 420
ctaaactcaa tgcttagcaa tggaatcaaa t 451

<210> 389

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-C6

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gtttaacaca gaaataaata aataatgagt tcattgcagt accttatgtg gtgggtttgt 180
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<210> 390

<211> 406

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-C7

<400> 390

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agcagggtgca ccccgacatc ggcattctct ccaaggccat gtccatcatg aactccttca 180
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tcgccaagca cgccgtctcc gagggcacca aggctgtcac caagttcacc tctcttagg 360
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<210> 391

<211> 457

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-C8

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 caggttgac gtcacctc ctaagccca aatattccat ggccacgtat ttcgaccgg 180
 accgtcagtc gaacgtagac tacacaaatg tcaagaaggt tcttgatgat gttctccccg 240
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 tctccacaa tacgacgttc tgctgctca agcagccgc tggcggtcag aaggggtgcct 360
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 gtaactcca agattgggccc gcgagcgtgt cggaat 457

<210> 392
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-D1
 <400> 392

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 taccgcttcg tcatcgacat cgcaggcagc ctcggtcaa cctcgtgagc tggaatagcc 300
 accttgttga tggttgcgtt agtttgcttc gggaacgcg tgcagattta gagcttttag 360
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 a 421

<210> 393
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 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-D2
 <400> 393

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gccgaatgaa ggatttttgct tgccttgaga aattgtctgc ctatcacagg atcatgcata 180
 aggtctatgt gatacttaga tgtatttgct aagtgttcta aaatgctgtc cttgtgccta 240
 aattcacgtc tgtcacggtc agcatcatcg cagggtctcaa tggctaacta cgggcatcaa 300
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 tggt 364

<210> 394
 <211> 301
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-D3
 <400> 394

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 gttgaaagat attattatct actgcttgta gcctacctga gataccatca tattttgctg 180
 attatggaac tacttttata ctgcttaaaa caaaagtatt aaaaaaaaag taacttaaaa 240
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 t 301

<210> 395
 <211> 454
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-D6
 <400> 395

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 gaggaggagc aggttccaga ttactcgaga gcctattctg gtggattgag accccttgcc 120
 catgtcatga tggatgatga gaccgaggat gatgatgaag atgctgaagg ggacggagag 180
 ggtgacgagg aagaatatga cgtgaacat gcttccgccg atgttgatga tgagatggac 240
 gaggatgatg atataggtga tgatggggat gatgggtgtg atggagttga ggtgaatgca 300
 gatgaagatg aaggcgcgac ctcatactcg tcagagtaca gtgaataaga gcttctgtct 360

ccggtgacca tttatgcagg tagtgatact ggtggacaat aataagcctt ttgccccttt 420
 ttgggggcat agtgggctag atgtggaacg ggga 454

<210> 396
 <211> 433
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-D7
 <400> 396

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 gtaccaattc cactattctt tcatttcaca ttgagtgaag agggatacat cctcaacttt 120
 gggaaaatgt aacttggtat tggtttatctc atttcctact catctttgct cgagtcttgt 180
 gatggataga caaagcacac ctccctcggt ctacaacaac aacgacaagt tcgatgccat 240
 gaaatacaac ttggacgcca aaatggatgc tcaattggag gagatcaaag ccctcatcaa 300
 ggctacaag cggctcttct catcttcgag aagacgctca agtgcacata cttccgagct 360
 accatctctg gctagatcac attggcatta acaccaccac cgacaagaac atgaagggtca 420
 acagctcaac agc 433

<210> 397
 <211> 433
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-009-Q1-E1-D8
 <400> 397

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 gggtgcagca ttgagaagat tagtcggtag catcggccta cccgccacat gcacctctct 120
 cgagatatcc ttagatgaag gtggcccgtc ctgagcacgg atcgactctg gtgccggctg 180
 gctcgcaccc ttgttattct ttcttttcca tcccttcttc ttctgatgta atgggatcga 240
 gttctgctca gagaccaccc tcttgagtgt gttggggctg ataatatctc gcacctcggc 300
 tatctgaggg tcggtgaagg cggcagctgg aagcatctcc tgagaacgta atgccagacg 360
 acgcctgttg caattgggtt tctccgcggt accagctaga tcgcgatcgt cttttgtang 420

gttgggttct tga

433

<210> 398

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-E1

<400> 398

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tatgtaacga agttcgagca tcagatagtt tttgattgtc ttccttatga gtggcggtcg 120
gggacgagcg atggtctttt cctaccaatc tatgccccta ggagcatgcg tgtgggtactt 180
tgtttcaatg actactagat gtttgcaata agtttgtgag ttcttttatga ctaacgttga 240
gtccatggat tatacgcaact ctcagccttc caccattgcg agcctctcta gtgcataact 300
ttccccggct tcgacaaccg accatagtag ctctctcaca atagccacca tacctaccta 360
ttatggcatt tccatagtag gtctcagata tattgccatg c 401

<210> 399

<211> 455

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-009-Q1-E1-E2

<400> 399

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ggggccatag gtttcactag tggcttctct caagatagca taagtattac ggtgggtgaa 120
caaattactg tcgagcaatt gatagaattg agcatagtta tgagaatatc taggtatgat 180
catgtatata ggcatcacgt ccgtgacaag tagaccgact cctgcctgca tctactacta 240
ttactccaca cattgaccgc tatccagcat gcatctagag tattaagtgc ataagaacgg 300
agtaacgctt taagcaagat gacacgatgt agagggataa actcatgcaa tatgatataa 360
accccatctt tttatcctcg atggcaataa tagaacacgt gtcgtttccc ctattgtcac 420
tgggatcgag caccgcanga ttgaacccaa agcta 455

<210> 400
 <211> 408
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-E3

<400> 400

attcacgggt cgacggggat tttgcagatg agtacactcc ggtttcgcgg ggaaagaagg 60
 gaaatgagaa ggagaaaagc atttccaata gcaaggtgaa ggcttctaaa gtaaagaaag 120
 aagaaaccgg ttctgatgat gaatgcaagc caaaatctca gaagagaagt ccagctgcgg 180
 gcaaacccaa gatttccaag attaagaaac caaaagatga atatgataca aaggaggaaa 240
 agaaaataaa gaaggaagtt ggtatcaaga aagatgaaaa gaaggctgct ggggtggagg 300
 gggctattgt ggtgaagaag gagagaaagt tgtatgaatt gccagggcag aaacatgatc 360
 ctctctctga aagggatcca ttgaggatat tttatgaatc gctctatg 408

<210> 401
 <211> 433
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-E5

<400> 401

aattccccggg tcgacggggt gagcaaaaac atgattagat catgtttatt gcaatatggt 60
 tattcattta agtaagagaa taatgcttat tctgtttaca taattaacac cttctatggt 120
 catgcacca atatgaatgg tttattgaat ctcggttgta gtgatacaca tggtcataac 180
 gttgatgccaa aaagatgaag agttgataat gatagtacca ctttcttggtg gcaactgccg 240
 ttaggtcata ttggtgtaaa gcgcatgagg aatctccatg ccgatggact tttgaagtcg 300
 cttgattttg aatcgcttga cacatgcgaa ccattgcctca ttggcaagat gactaaaacc 360
 ccattctttg gaacaatgga acgggcaagt gacttggttg aaatcataca tgctgggtgtg 420
 tgcttgctct gtg 433

<210> 402
 <211> 439
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-E6

<400> 402

aattcccggg tcgaccttct agataagttg gttattgtac gtacacagat atatggccct 60
atcgagatga tccagatatt agctattaga gcacaagtgg aggagattga aattgatgag 120
gacagtcttg catttctagg ggaggttggg cagcagacat ctttgagaca tgctattcag 180
ctgctgtcgc ctgctagcgt agttgccaa gctaattggga gggagaagat ctgcaaggct 240
gatctcgaag aagtccgtgg tctgtatttg gacgcaaagt cctctgctcg tttgcttcag 300
gaccagcaag gaagctacat cacctaaact aactcctgca caagaattcc cagctgtcgg 360
ctcaagtgat tggactgtct tcccctagca gatttggtaa gcagccgcat agacttcac 420
aagtgtacaa ttggggcat 439

<210> 403

<211> 440

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-E8

<400> 403

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tgctaaccga cgtaaaacac aatagccgca gagcaaagga taagacgatc gacggaggag 120
aggaggtgga gaaacaacat ccggacatga agccaggacc gacacgaggg gcggcgccgg 180
atgaaacaag acagacggtg atggcgcgag gggggagggg aggaagacag accgggggaa 240
caaaagaaaa gatacattat aaaacctgaa atgtttaagg actaaagtgt aaaaggaaaa 300
ataataaaca gagaaaattt ggtttaggca aataaacaga gaaagttttt tttttgagac 360
aaataaacag agaaagtgaa aacttttttt ttgaagctaa gaaactgaga actggaaaca 420
ggaaaacacg cggccgctct 440

<210> 404

<211> 294

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-F2

<400> 404

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gtagcattca cgtatgatga ccgttgtgtg gcaaatttga agcatgggggt gtttcgctca 120
atgacatcca tactaatgta cgtctgcgac caacgataga cctcttctat caagtccatc 180
acctaagggc atgcgtagta gtacttttct tccatggcta agaaaatttt gcaattacta 240
aacgaattct ttatgacaaa tatgactcta tcggtaactg gcatatttac catt 294

<210> 405

<211> 405

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-F7

<400> 405

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gccatgcata gacgcggagg agcttgtgta ggtgtgaatg gggaccggag ggggtggcggg 120
cggggtgagg gtttttatga tgtggggatg gtgagagttt tctttttttc tttttgaatt 180
gggtggtgag ggttttctgt cccacaaaga atttcagagg caacaatttg ctagagccaa 240
ccatgtgtgg ttgacgtaac aggcaaatg aaagtcattg cacatagtgc caattttggg 300
aatcgtgtgt gattgacgta ctaccttcgt cctggtttat tgggtcccctt tgtaatttgt 360
agcagatttt gaccaaatat ttaactaaga gatgtttatg catgt 405

<210> 406

<211> 431

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-G2

<400> 406

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tcgagggtgag aaaggacaat gcacgggtacc atagaggcta gcaaattgcg gaaagaggta 120
agaatgcgta taatccatgg actcacatta gtcataaaga actcatatac ttattgcaaa 180

agtttattag ccctcgaagc aaagtactac tacgcatgcc cctaggggga tagattggta 240
 ggaaaagacc atcactcatc cccgaccgcc actcataagg aagacaatca ataataaatc 300
 atgctccaac ttcttagcat aacgagagac tataacttgca tgcttcggga atcacaaacc 360
 ttaacacaaa tattcttact aaccacaatc attcactagt acctcccaca tattatcatc 420
 tctatatcgc g 431

<210> 407
 <211> 307
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-G3

<400> 407

gggtcgacgg ccaggtgaca tgtgatctgc tgaataatga agttttgttc tttttctgag 60
 gaagagagat aagttagtgt cagggtgagt tctttgcttg tagtaggaag taaggctctgt 120
 tcttgacagag cttgaagctg gttgaataga tgaaagctga gctcctagtg ttagcaagga 180
 atgttttggc aaggctttgt gtcagagtca atttgtttcc atgtaacact ttgttggttca 240
 atcggttacc ttaagtggga atggattatt gtgtcaagaa agtgggtgaag agaattattgg 300
 gtaccca 307

<210> 408
 <211> 385
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-G4

<400> 408

ttcccggggc gaaggagggc aaggagccca agtctcccaa gaaggccgcc aagtccccca 60
 agaaggccac caaggcttag aaacacgcat atgttgctgt aggctgttta atgcttcgta 120
 actgtggtcg ttgttctgct aatggtgtcg atgtaatctt tggttgctaag agaaatgtca 180
 gaaatctctc tgattaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaagaaaaaa aaaaaaaaaa aaaaaaaaaa 300
 aaaagggggc gctcaaaagg ttcaaaccctt acttaccctt gaatgcaatt tcaaaccctt 360

tcaaaaggggt caccaaaatt caatt

385

<210> 409

<211> 356

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-G5

<400> 409

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gcccattggct ccattcacagc ccaactctgg cctcttcggg ggcattcaaca tcgggtcacg 120

tcggcaccat agcgcgagct gccgccgcgc ccgtccgacc gcatagcgaa aggtaccaa 180

acgggtgcatt tcgtcatgaa cttgatcagg taggtatctg ggattgctcc gtatgataat 240

cctatcactg atctttctcaa cgttggcaat gacaatcctg ccctgacagt ggcgaagcga 300

ttattgggta accacaagat ggcgatcaag aagagatagg agatgatcag tgtcct 356

<210> 410

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-G7

<400> 410

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gcatatccg cggccatgga ggcgtggatg tgcgccacag tgcgcccta gggaaggcct 120

caagggtggc tggcccatgt actgtatcac tctcagcca tgcgccagt aggatttagt 180

attttcactt ttcttttcta ttttcttttc tagcctctgt tttgcgttta gttgggggtac 240

taaatgaatt tttccagggg tggaacttgg cacataattc cattgcagta ttttggtggt 300

gtacaaaaag tctcagagca tttggagttg tataagcatt ttcaaaaatt gaaattgttg 360

gttaaaatgg ttgctgatcc actgtttaat ttttaagggc actttaacaa cttaaataat 420

gttgggttct tcata 435

<210> 411

<211> 421

<212> DNA

<223> Clone ID: LIB103-010-Q1-E1-A6

<400> 413

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tgtggatgct gtggcacttg agaagcttga aaaacagggg gttgtttgtg aacccaaagc 120
ctctaccatc gcgattattc aggacaagta caggcagaaa ggccatttct caaaatttgg 180
aattccgata gctgactttg ttgaagttga tactttaagt agcatagaga atgctgggga 240
aatgtttggc tatcccttaa tggttaaaag caaaagattg gcatatgatg gtcgtgggaa 300
tgctgttgcc caaaataaag aagagctatc ctccggtggt tcttcactgg gtggatttta 360
gcatggcctg tatgttgagc ggtggacacc ttttgcaag gagctatctg taattgtggc 420
aaggagcaga gatggttgta cagtctgtta tcctgt 456

<210> 414

<211> 358

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-A9

<400> 414

gggtcgacgg agagcgatat ataacttgcc aaatttcgat tcccagactc cagatctagc 60
ctcatggttt gttctgctgc tctgaaatc gatggcggtc cgcctctccg acatcctcct 120
ccacggagag ccgccaagc aacgtgatgc attttcttct cccatgaacg cttcaccaag 180
tagcagcaca tggagtgggt cgcattaaga ggaggagcaa gattgggatg actcgggcca 240
ctatttcctc ccctgatctc taatgtctag ggcccagata cgcggttggt catcccacat 300
cttgatgcca tttgctttcc tgcgaatctt caagtgtcac tgtagattt tgatgggt 358

<210> 415

<211> 462

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-B12

<400> 415

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cctcttacct cttcgtatct tttgaacgat tatccgtata atagtaaaat ttcgagagag 120
gaaataaacg gacatatgct tctcaactac tcataacagg tgacataata ttgacagatg 180
acgttacaca gccactttga cgataatddd aaacgggatt ttgtgccaag tgatatctcg 240
tttgagaggt gttgaggata cctatgcaat tataactaatt ttgtttgggt ttgagttgat 300
tttgatgagt aaatgaaata aataactaaa ttttagtttc gcatttgaat ctttattaat 360
cggatgcgaa actgtaattd taatatttat ttaattaatt catcgaatca acataaaccc 420
atacaaaact acactcaccg ggagaaaatt cctccaccaa aa 462

<210> 416
<211> 463
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-010-Q1-E1-B2

<400> 416
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gagtattgaa gcttttgcca ttgagaatgt ggaagaccaa tgtcttcatt gcaccgtcga 120
gctttgctga tgaggaatgc cctttgatgg gcactagagt tcgccttatg atatgataga 180
tggtgcgggg tagatactct aggtcttcaa caaagaattc ctttggatat tcagcgtcac 240
gtggcagtgg cttcatcatg ctcaagtatd ggctcatggt gagctcagcc ttctgaaaga 300
tgctttccac aacatcgcgg tgaagctgac aaccaggttc gtacagttcg cctggagtggt 360
atatgccggt aagctcaatg agatcaaagg ctttggcttc atgatgaaca ttgcctgtga 420
tccactcaag gacccatgtc gttgtatccc tattgtagcc gcg 463

<210> 417
<211> 336
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-010-Q1-E1-B7

<400> 417
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tgccccaagg gactgaaccc ggcgaagcag atcgacacaa taaagaagct gcagctcgga 120

gcctgagtga ggtctaccac cccgtggaga tgtggaaaat tgtaatcagc ctggcatttg 180
 gtttgttttg gctccgtggt gacaaataat ggggtggaaac gctggatatt cctagcttga 240
 cgattccgtg tagttcgtga ataattgcta ccagatttta ttcttttcgt gctgtatcta 300
 gtttgggtgg tctccgttga tcattctttg aaaaac 336

<210> 418
 <211> 442
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-B8
 <400> 418

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 tagtttagat cgagtctgtt cttcatacct atagtccacg aaaaagccaa aataaaatta 180
 gggtagttc atcccatccg aaccaatctg agccttgcat aatcttttct gtatttgctt 240
 tgcgaattt gcgggtgcat cgtcgtgtcc agttgctggg cttagcgtct agtcttttag 300
 agtttcgagt tctgttcaca ggttgtcacg tcgccgtac catataccac caccacatat 360
 tcaccgcaa tccgaatcca tatacgccac cacatatccg ccgccatcac gccaatccga 420
 gttcacctgc aacatatatc cg 442

<210> 419
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-C2
 <400> 419

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 ggccccggca tagaggacga cggctctgat gaagcatgag tacatgatgc aatgctattg 120
 gtccgtcggc gtaggtgata gacgtcgatc tctatcagtg gacgacgca gtcttggttag 180
 gtgctcccgat atgctggaag acagtggta tggatgtagt ataagactgt tgctatcggg 240
 gatgtgtcta gtgaaggctg gtgtcaccat cgagtgttct aacctgact gtgtacgaat 300

gggaaaatgg acggagatgt ctggggaacc atgttttttg gacgccactg tcagagatat 360
 gggaaagtta cgaacttata cgccgtctat aatttgggca tcacgtcggg tgtggctcgc 420
 atcatg 426

<210> 420
 <211> 431
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-C6
 <400> 420

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 gcatgagctg cacgagcacg agctcttgct gatccgccgc cccaggccgt acggctgcga 120
 cgggtgcgaa gagatgggca cctcctggtc ctacaactgc gcggagtgtg acttcgatct 180
 gcacaccaag tgcgcgctgg gtgaggagaa gaagggagag gaggtgaagg ggcaggagga 240
 tgctgctgcc ccagctgggt acgtgtgcga gggagacgtc tgcaggaagg cctaggtagc 300
 gttgtgttgt gtgtgttctt ttccagctga agcgtgtctg aatcatgtgc tgtgtggtgt 360
 gatgataaat aaatcttgca tccgatgggt tggcttggga agtagtattt gtcgtggtga 420
 cattcatgtg c 431

<210> 421
 <211> 423
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-C7
 <400> 421

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 ctgacgagct gacaggtgtt cccttcagcc aatcataatt ttacacgtgg aaattcccca 120
 ttggtcgggg ctgttaacgg gttatcggat ccaaaatcct acacgatagc ttaacggcat 180
 tcctttacgg tggatgcctc gtgttggtca cccttgacga aagcacttct atgacgcgcg 240
 atttatcatc atggaagtgg acacttccgt gatgataatt ttggtaatgc catggatcac 300
 ttctacgaca gcacaggtat gactatcttg attctatcat aaatttgtca tggatgtaca 360

tgcatgataa aaaacgcgac ctactccgac aaacacgtat catcacggaa gtgtactttt 420
 ttg 423

<210> 422
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-010-Q1-E1-C8

<400> 422

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 tctataaccg tttccgataa ctggaatatt gcaaacgctt catccttgct actcatttgt 120
 gctcgcatgt ccatcgcatg cagagttttc tggttctgcc taaaaccagg cagattctag 180
 gcacgggagc tttccaggca gattctaggc agattccagg catggaagat ttacgatgtc 240
 tggcacatca caaacagttc atgattataa accgtatacg ataggtagac aatcacacac 300
 atttagtttt cccgcaccgt atgtgatagt gtctgacatc acacacgctt tgccaacggc 360
 aactgtgtgc atgcttgac acgtttcctc tctgtgaacc gtctcggatt atgggtgtat 420
 acgcanaaat tttgtgtt 438

<210> 423
 <211> 352
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-C9

<400> 423

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 ttggacgaat atccgtataa taataggatt tcgagagagg aaatacacgg gcatatgctt 120
 cgcaactact cataacaggt gatatactac tgacagatca cgtaacatag ccactttgtc 180
 gatgatttta atccggattt tgtgccaagt gatattctct ttgatagggt ttgaggatat 240
 ctatgcaatt ataccaatth tgtttggatg tgaattgagt ttcattgactc aatgacatac 300
 atactagaat tttagtttcg cactttgaac cttattaacc cgggtgcgaa ac 352

<210> 424
 <211> 437
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-D1

<400> 424

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 gccacttcc cgtcgcccc ggctctccaa tcgcagttct ggctgtgggt ggtgacgtgg 120
 cacctgggtc tgttcacgc gtcaccttc ggccagatcg ggttcaaggg caggaccgag 180
 gactacttcc agaagtagcg aattaactag ctttggttcg tgcattgtgc tcgtccttgg 240
 gctgctcaag ggctgcttct gcgcattcgt gttcaatgta aaatctgcca tgccttttgg 300
 ttttgtgcat gcgtgtggct tcgcaagccg tgtgattgct gtttggttaac tacctcttcc 360
 atggtaagca caaaagagtt caacaaaagg acagcggcag ctaggaaaaa aaaagcggcc 420
 gctctagagg atccaag 437

<210> 425
 <211> 364
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-D9

<400> 425

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 cggagaaata ccagagaatg ctataatagg cggatcaact gctgatgggt atccaacgta 180
 tgtagcccgt tcgttcctca gtgcagatga agatgatgaa aattactctg gaagtgacta 240
 caatgggttat gtagctgggt gtgtgttacc tggaaaattg tcgatcgacc tttgtactcc 300
 gcagagtata tacacgctca caaagaacat tgagatactg actgtgggtc atgggacaaa 360
 aatc 364

<210> 426
 <211> 450
 <212> DNA

<223> Clone ID: LIB103-010-Q1-E1-F5

<400> 428

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aggaaagagc attaagtctg ccctcatcgg tggttctagc ctggcattca catctgccat 120
cctggacgtt ggtggaata ctaccagagt ggacaatgga aaagcgtacc atgcatacac 180
aacggaaaag aagcccgagc ctgcgcattg accaagggtg tctacttgta gcacaaatca 240
tgcaaaccag ctcggtgaat ttttgagctg atgcgtgctg ttatgtctgt tttgctgatg 300
cacctagtcc ctttgcaaag ctgtagtaac ttgttttgct cgagggcaat acaacagacc 360
tggaataaat atcttgcttt attttgcttc atcgttgggt atgataataa tcacaatgtg 420
acacaatatt gtttaccca 439

<210> 429

<211> 186

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-F7

<400> 429

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aatgcgctt ttgtgaattg aaaactgtaa gcgtagttaa aactgcggcc gctcgaaagg 120
atccagagct tacgtacacg tgcatacgac gtcagacctc ttctatactg tcaggtaact 180
tgatgt 186

<210> 430

<211> 443

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-010-Q1-E1-F8

<400> 430

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aaaaagaggc tattgatccg atcaaattggc gttaccatgg tcggacacga ccaagcccc 120

gataggcgta gctatgggtc aagtcagcca ggtcccaaaa tgaaacaatg gcattatgcc 180
gatcaaaagg cgtgacaatg gttcgggttc gaccaagccc ccaagtgatt ctgtggcctt 240
aggccgatca agaggcgtga ctatggttca gacgtgacca caagtcccca agtgatgcat 300
tggcattacg ccgatcaaga ggtgtagcaa tgggtcgggt tcgaccanag cccccaagtg 360
atgctgtggc actaagccga tcaagaagtg tgactatggt tcagacgtga ccacaagtcc 420
ccaagtgatg ttgtggcttt ccg 443

<210> 431
<211> 438
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-G5

<400> 431

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gtccagacga ggtgacggag caggtcggta aggagacgtt gcaacttcca tgtcagtcga 120
ggtgttgaag tagttcggcg tgatggacat cggctcgaag aagcaatggt gcggccatgc 180
cgatgcaggt cacaactcgt gacgtgggtca atgccggctt gatgaagtga ccgtgcggcg 240
atgccgatgt gcccgtccg tgtaatccgt ggggcggcga gggttggtgat gatttactct 300
tcgcgatgct aaaatcttgt ttggcttgcc gggatgatga tccgaagaag ttgagctcgg 360
ctcaacaaag cgacgatgtg tctagcgcag gtcggcagcc gtggagcaac gttgtcgagc 420
tggtttgaca ccggcgcg 438

<210> 432
<211> 348
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-H11

<400> 432

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tacaaatttg gaggaataaa agatccgcca caagattatg gatttactat aagagcaggg 120
aagacagact atcaaattca agtaaaagt accgatactt ctcaagtttc gacagaggaa 180

agcagaaaca ttacaactta ctttcaaaca aataccgttg aagtgaatgg aataaacggc 240
 tgggggtatat ctaaatggtt ataccaaaat attgaataac caacactcac attagaagca 300
 aaacataggc aattttacta ttaaggaatt gaataaaaaa attacttg 348

<210> 433
 <211> 327
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-H4
 <400> 433

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 aagaagcaga accctcacat tggccacttc acaaaggatg tggcaaggcg gtcctatgac 120
 actgatttga tagttgatgg ctaccaagac tacattaccg aagctgtgtg gttcaaggaa 180
 cagtatgact tcaagctggg taatctgatg gagcactacg gaataaatag cgaggctgag 240
 ataataagtg gatgcattct taagatggca aataatttta ccaagaagaa cgacgccgat 300
 gctatcaagc tggcggtgaa atctttg 327

<210> 434
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-H5
 <400> 434

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 catagcatcc gagacgaatg gtcgccaga cacctcggcc aagaaaagcc aagaacaatg 120
 gccgcattaa caagcctcac gaccogcttt tacgcaggag aggatagttg gttggcaaga 180
 agcagcacca gcgaccgag cacatccgaa ctgagagatg gaaatgggaa accgcgccgt 240
 aacaaagaac aacgccgat caaggataat agcttgatga gcacggcagt caatgccgga 300
 ttcaaaagct ctcggaacaa tcagaaaaaa ctgccacca aagatgacag ggacgagctg 360
 tctaacctca acaaatcct ggacaagata tgtaaatcc acagtacccc cgaggacctg 420
 caaacctac ccacagagat t 441

<210> 435
 <211> 356
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-H6

<400> 435

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aggccggcgc cgaggggaag acgaggggca ggaagaaggc cagcaaggcc aagaagggcg 120
tggagacgta caagatctac atcttcaagg tgctcaagca ggtgcacccg gacatcggca 180
tctcctccaa ggccatgtcc atcatgaact ccttcatcaa cgacatcttc gagaagctcg 240
ccggggagtc cgccaagctc gcccgctaca acaagaagcc caccatcacg tcccgggaga 300
ttcagacctc cgtccgctc gtctctcccgc gcgagctcgc caagcacgcc gtctct 356
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<210> 436
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-H7

<400> 436

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ttagtccac tctatgtaag cacaagatca aattggagaa atatgctaaa ccggttggtg 120
atcaccaacg acggttaaat cctaagatga aagaagtggc aagaaaagaa atactaaagc 180
ttccggaggt aggtataatt tatcccggtg atgatagtca gtaggtaagt cctgtccatt 240
gtgtccctaa gaaggaggt attactggtg ttcctaata taaagatgaa ttgatccac 300
aaagaattat taccggttat agaatggtaa ttgatttccg caaattaaat aaagctacta 360
aaaaggaaca ttacccttta ccttttattg atcaaagtct agaaagatta tccaaacata 420
cacatttttg cttt 434
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<210> 437
 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-A2

<400> 437

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tatcccttga cgtacgagcg gataaaatat gctgccctcg atgcccggtg gattttcgag 120
aaagctgcaa ggtccaaaga gcttgcctgcg aagccgtctc gcacagagaa tgagaacaag 180
aagaagaaga agaagaagaa gaagaaaacg ctgcaccagc aggagggcat tatggatgga 240
tgaactatatt cctctcttgt aaaaaaaatt attccctctc ggtgtatatt gatatagatg 300
gactatttcg atgggtgtgca tgtcttttga acagagtagt agcgtgggtc ctcttgacta 360
taagaaacta cttatccaca tatatagctt tctctgctac tccttccagt gatcggtatg 420
cagtgc 426

<210> 438

<211> 388

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-A3

<400> 438

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gaggaaacttc gcaacaaatc aagtgggtgct tacaaagcct catgtgaagc ccccatca 120
tcgagtgaga aacaaacctt caatgaagaa ttgatcttaa tggatgaagaa ctttaacaag 180
ttctacaaga gtagaagcaa agagagaagc tccaagtcaa aggcctacaa tgacagaaga 240
tcttctactc cacagtgaaa ctgctacaat tgtggaaggc ccggacacta atccaatgac 300
tgtaccgacc cctagaagat aatagaagaa tctcccatga gatgaattat catagatgaa 360
tcaccatcta tagaaagaaa gagtacag 388

<210> 439

<211> 340

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-A4

<400> 439

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ccatagcctg atgatattag cactacagaa cacgggagggc tttgcagcac gcatgatcctt 120
gccagttcga cgcgctgagc acgactcagt ccttggtacc cttgggatct acggctgggc 180
acatcaacac tctcaacggg gggcatttca gtggcagact ttctacacat cgggtgtggtta 240
atagccagac ggtatcatgc tactcgcctt gaagaagggt gccctttcgc caactgtctg 300
atcacgcagc agggggcggac cgatagcacg atcacaatga 340

<210> 440
<211> 404
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-011-Q1-E1-A5
<400> 440

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gcctctatca agtggtatca gatttccagg ttgctcgggtg agattttaca gtttttcgta 120
gttttagatcg agtctgttct tcagacctag agtccatgaa tgaaagccac agaataagat 180
acggttagtt catcatatcc gaatcaatct gagcctttgc ataatctttt taggggttttt 240
gctttgttga atttgcggtt gcatcgtcgt gtcaagttgc tgggtcttaga gtctagtctt 300
ttagagtttc gagtctcgtt cagaagttgt cacgccgccg ccgcaccagc atcatcgcct 360
tgccatctaa caccattgct tatccgccac cgctttgaat ccgt 404

<210> 441
<211> 427
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-011-Q1-E1-A6
<400> 441

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atgcaaacgt gagtacaaat gtaccagca agacttacat cagaactaac tacatatgca 120
tcattatcaa caaaggggat ggtgggggtt aactgcagca agccagcttt gactcgggtgg 180
ctatcctaaa ctacgactgc aatgtaactc ttttgagggt gcgcacacga gtccacatat 240

tcaccatata aatacaccac tatggaaccg ctcccgtctc cctacgagaa cgccatccat 300
 agcactcatg cttatcttgc gtattttaga gtatccactt tcacttgtct atgaactgat 360
 ataagcaacc cagaagtcct ttaccgcgga cactgctatt cgaatagatg atgttaaccc 420
 tgcaagg 427

<210> 442
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-A8
 <400> 442

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 gtgcctgagg acgagccaga tcgcgctgga gaagcagaag aatctggagt gctgggtactg 120
 cccctcctgc ctctgcaggg gctgcttcaa gaacaaggac gacgaggaga tcaccctgtg 180
 cgacggctgc gacgaggcct accacgtgta ctgcatgacg cccaagcgca cctgcgctccc 240
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 gtacgagaag tcgatcctga agaaacaaca acatataagc gccaaagcgtg cgagccagtc 360
 ggacgacgct tagcctagtt gatgatgcta ttgcttggcc aagaagggag taataagcag 420
 agcaacgttt 430

<210> 443
 <211> 444
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-A9
 <400> 443

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 tgctagaata tagaaggtct agagttctct ctttattatc catgatcatg tgtttgtaac 180
 tgctactgta actcaacctg ggtgttctgt atataaagag aagacagccg gtgaggttca 240
 tcacggctta acacagcaat acttctgttt acatggatat agacgccatc tgaccaatgt 300

caacctcttc ctctctctc atggtctccg tgccggcggc taccaccgtc gtcaccgtgc 360
gtctctctcg cgacaacat ctcatgtgga aggcacagtt cctcgcattc ctgcgcacct 420
acaatctcct tggcatcgca tctg 444

<210> 444
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-B12

<400> 444

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acatgcgtga acatgtgcc aagtctagcca ctcaattcat ttaaaggagg ataccatccc 180
atcataccac atcataatca ttctaatagc atgttgccac gcaaggtaaa ccattataac 240
tcatagctaa tcaagcatgg cacaagcaac tataatctct aaatgtcatt acaaatatgc 300
ttacttcata atagctgact caggaacgat ggatcatcat atttacaaaa acaagagagg 360
tcgagttcat accagctttt ctcatcccaa taagtccatc atatatcatc attattgcct 420
ttca 424

<210> 445
<211> 409
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-B2

<400> 445

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gcatcaaagc cattatagag aggctgatac agagggaagg ccatcttgta gtcatagacg 180
aaggaacagc ggcagcagaa ggtgctgcag caagggcatc ggagcacaga atcctggctg 240
ttaacccgaa ctacgtcatt gattgattaa ccagctgagg acacagctaa ctagatccat 300
catatgtggt tgaccaatag agcagacatt caaacggaag acatcctgtt gtcatatgct 360

ctacaaatga tatgtttgtac ctgccatccc cttcccaagg agagcatag

409

<210> 446

<211> 359

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-B5

<400> 446

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caatgggata tagatttgca aacatcatta cccatacctc aacagacaca tctcttcaaa 120

attttaacgg gcatgtgaat ctcaaacctg atccaaccct tatcatttac tggacgacct 180

aaaccaagca gtgcacatca tcatcagtcg tctctcatga cgcaactctt ggtggccatt 240

taactgcaga tggtactcat catatgataa tcgagctttt tgccaacatg tcactctccg 300

taaacggacc tcatattaac agtcacacga acacaggctg ttcaaagggc catggactt 359

<210> 447

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-B6

<400> 447

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agagaaggtc atgtgagcgg ccccgacaaa gaggacgacg gcaccgatga agcaagagga 120

cgcgatgcaa ggctattagt ctgtcgccgt ggatgagaaa cgtccatctc tagcagtgga 180

cgaagcggtc ttggtaggcg ctccggcatg gtggaggatg gtggcgttgg atgtggtgga 240

ggacggcggc gatggatggg gtggaggacg acgatgatgg atgggggtggc cgacggaggc 300

tggtgtgggg atggtgttct tgcgcggaca gtgtatgaat gggaaaatgg agggagaggt 360

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<210> 448

<211> 424

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-B7

<400> 448

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acgtccttct tccagggtgct taacattccc accaagatta acaagggtac tgtggaaatt 180
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agtgggtctg tcttcagccc tgaggttctt gacctactg aggaagacct gatggacaag 360
tttgcttctg gtgtttccat ggttgccctca ctgtccctgg cgatctcata cccaacatg 420
gctg 424

<210> 449

<211> 430

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-B8

<400> 449

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tatatctttc ggagtagttt gtcatttgct ctagtgcttc acttatatct tttagagcac 120
ggcgggtggtt ttattttgaa gaaatagatg aactctcatg cttcacttat atcattttta 180
gagtccttta gaacagcatg gtaatttgct ttggctataa aattagtcct aatatgatag 240
gcatccaaga tggaaataat aaaaactttc atataagtgc attgaatact aagagaagtt 300
tgatacttga tgattgttga gatatggaga tagtgatatt aaagttgtgc tagttgagta 360
gttgtgaatt tgagaaatac ttgtgttgaa gtttgcaagt cccgtaacat gcacgtatgg 420
taaacgttgg 430

<210> 450

<211> 426

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-C12

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 tcgcgctctt cacgctcgac gatcccacca ccaacaatct cctcagaagc ttgggagcgg 180
 atccgagtca gctagcgtca gttgcagtca cccgactcca tgaagagctt gcaaaagatg 240
 gcagagatct cgcaggagca tcttctctca aagtggccga gaaagcaccg gctggagctg 300
 gagctggaag atctgccttc agcaaactct taagcaaaaa gaaagataaa ggcgcgctag 360
 atcagttttg tctagatttg accacacaag ccagtggagg gtttattgac ccattatttg 420
 gccgcg 426

<210> 451
 <211> 394
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-C2

<400> 451
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 ttaaaccatgt attagataaa tatcattgcc atataaaata tatatatata gaaaacccaa 180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
 aaaaaaaaaa gacaacaaaa aaaaaaaaaa aaaaaaaaaa acggggcccc caaaagggtc 300
 aaaccttact tacccttgaa tggaagttaa aaccctcca aaagtttcac caaatttcac 360
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<210> 452
 <211> 405
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-C4

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ctgggatgga gagccgttca caggactgcg gcgacgtgat cttctgaagt ttcttcacac 120
 tggatgaaagc ctttgggaga tttattctgt catcgatcta tacatgtagc tcctgtctta 180
 tttctccagt ctgaactggt ggggggttatg ctactagtta tcgtttgttc tgaacttgat 240
 gttctgggtg tttttgcttg agtcgtcctg gagagcccg cttgtgagat ttctcagggc 300
 tgtgctgggt ggttgcgttt tgcgtttgtg aaacctagtc agtttcttag attgggtaaa 360
 aatctgcact tcaaaggagg gaggtgtgg gatttgcctt ttttc 405

<210> 453
 <211> 199
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-C7

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 gatgatgtat aagccctccg tgattgatgc cccctccggc tgagctccgg atcacgccac 120
 acgatgggat ctctgagta cacaacgttg cggcggtgaa agtacgtttt tggcctcgta 180
 tctgatcggt tgggggtac 199

<210> 454
 <211> 409
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-D10

<400> 454
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 cagaccaca gtctcgtag ggatgattcc ttgtagcagc ttcattgttc tgcataaaa 120
 gccatcacag cacatgtctg ccatatagtg cttcatgacc cttgggtag taatgcagac 180
 cagcgtcttc gtgccaaatg actgagatct ttacggaaaa ctttctatgg tgttaaactc 240
 accattggcg atggggaagg gtctcacatg aagaatatag ataacatcga tgacactgcc 300
 ggtagctccc ctgattcgtc atcaaaacgg gagtcatcat tcaactcccat tcctaaccct 360
 cctcttacc agagtctata tttggacgct cccactttg gcggcacct 409

<210> 455
 <211> 266
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-011-Q1-E1-D2

 <400> 455

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 ggtagggggg cgctaactat gcgtctatga cggatggtaa catgaggcaa gggacatgaa 120
 cttttacca tattcggggc ctctcgatgg agggtaaatt caatacaaaa tatatcctaa 180
 gttcagcggc cgctctagaa gatgcaagct taagtacccc tgtatacata atcatatctc 240
 ttccacattg acacctaaat tcaatt 266

<210> 456
 <211> 72
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-011-Q1-E1-D6

 <400> 456

 cgcgtattac attactacac cctaaagtga gtcgtattat agctcttctc ggtgatgaag 60
 caggtgcagt cc 72

<210> 457
 <211> 465
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-011-Q1-E1-D7

 <400> 457

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 aatactatta ggtactaagt tcatgataaa gtaaagttca attaatacata ttacttaaga 120
 actcccactt agatagacat ctctctagtc atctaaatga taatgtgatc catatcaact 180
 aaaccatgtc cgatcatcac gtgatatgga gtagttttca atggatgaaca tcaactatgtt 240
 gatcatatct actatatgat tcacgctcgg cctttcgggc tcagtgttct gaggccatat 300

ctgcacatgc taggctcgtc aagtttaacc tgagtattct gcttgtgcaa aactggcttg 360
 caccgcttgt atgtgaacgt agagcttatac acaccgatc atcacgtgtt gtctcggcac 420
 gaagaactgt agcaacgggtg catactcagg gagaacactt atacc 465

<210> 458
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-D8
 <400> 458

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 taatagataa ttttctttca catgcctgct ttgcataaag aatgccttat ccgccgctat 120
 tttctttatc gcctcgatct cctggagggc cttctgggct tcggccttag cgtttttggt 180
 actcacaaga gccaaaggca gctcggacgc tcgagctctc gagtcacgct ccaaactctc 240
 gtgtttttcc atcagagcct gcagctcttg ccgcacctcc gccatacgtg cctccggcac 300
 gtctcgcacg gtgcgctcca atgccccact gttctcggac ttggatacag cctccttcag 360
 ggccgccacc ttgggacgag gcccttgcaa catttacgtt g 401

<210> 459
 <211> 440
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-E1
 <400> 459

ggctcctaaat taacgggtcg acgggttgac caaagtcaaa ctgcctagag tttgaccaag 60
 tttatagaaa aatataaaca tttaccataa caaatatgta tgatgtgaaa gtacattcaa 120
 taatgaatct aatgggtcttt atttggttatt gtatatgtta atattttttg ttataaactt 180
 tctgagagtt tacaaaaactt gactttgacc aatgctaata tgccaaactta aataaaaatt 240
 gagggagtac acatttggtt tcttagtttg tagtgaatta atcatttggt gtaattgtga 300
 aataaatata ttaggtact gactttgaat gtaatgggct atacaattca atagttacaa 360
 tcattgttga attccaagat gtataagagg tcttttagtac ttcacaatat gctcaaactc 420

aaataatcct agtcaaatag

440

<210> 460

<211> 391

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-E10

<400> 460

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tgagagccct ttccatgtac gacagcaggt ttcatgtgta acgaaggcat tcttggtggc 120
aaggtttcga agacgattga catccacca gaggctcttc atctgacggt ttagccagtc 180
gtgatgccta tcttgcttct ggtgaagggc cacaagaagc tctcgatcag tgaggacacg 240
agcacgcttc ttgggtcttg gagcatttgt gctgtctgtg gcttcagtag atgctggtgc 300
acgtgtagtg ccagccaacg gatataccct ggatatggct tcaacacctt caacattctg 360
cgtgaagctc tgggtgttctg cattctgaag a 391

<210> 461

<211> 425

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-E2

<400> 461

gggtcgacgg gttttgggca tgatgttgag acatatcgtg atgagagagg aagggttaga 60
gtaagtaggg tcagaggaat gggaattcgt atgactcgtg atattcaaag gaatttggat 120
tttatcaaag agcatgagca gtcaaaaagc atgggacagg ccaacattgg caaaggatca 180
actagcaatg aagaacctcc agattttccg gaacatcttt ttgaaaatga tgggctgcaa 240
agctctgttg atctcagtga agattttgct gaaactatcg gtgacaacca tcacacgtcg 300
tcacttgtag gaggatctga tgatatttct gagggttcct gccatggaag caaagagaca 360
atagagatat cttttgtgga tgatcaaatt ggagtgaagg acaatgatga caagctgttt 420
ttgca 425

<210> 462

<211> 435
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-011-Q1-E1-E4

 <400> 462

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 catcctctca aacggcatca tggtgtgcag gaatgacggc cccaggtcta ttatgtcate 120
 cacaatatgg acacacagat gcaccatcac gtcaaagaac gcggggcggga agtacatctc 180
 aagctcattc agtatcacia cgatctcttc ctgtagcctt cggagctgct tcacactgat 240
 cgactttcga gagatgacgt cgaaaaagtt gcagagacca ataagcgtgt cacagacgtg 300
 cttgtccatt atccctctaa gggcaacagg taatatctgc gtcacatca catgacagtc 360
 atgagacttc atcccgtga accttttctt gtcggtgtct agatatctac ttatcttgcc 420
 acagtaatcg ggact 435

<210> 463
 <211> 458
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-011-Q1-E1-E5

 <400> 463

 tacagggtcca gaattcccgg gtcgacctga aaacaaataa taaacttcaa cataacaaac 60
 tttggggggc acattcattt gcaggaattt tgcaggcaag gaaaatggga aaaattccta 120
 caaacagag ggccaatatg tcacttactc ggcacatgat gagaaatttc tgtgcacttc 180
 aaactactcc ctccgtctca aaatataaga acatttttga cactttgcaa gtgtaaaaaa 240
 cgttcttata ttttgagacg gagggagtac aatacaaata gtttgggttt atctttccat 300
 gctttgttgc caacttcatt aagaaaaagt actccccaat taggcatggg taactaacgt 360
 ttcattttga tttgtacgg tatcttctcc tgtagttgaa ttccttttct tctctcgata 420
 cactactcat atgcaagatc gggagaaaac tgcaccgc 458

<210> 464
 <211> 421
 <212> DNA

<223> Clone ID: LIB103-011-Q1-E1-E9

<400> 466

gggtcgacgg cgaaaagaca ctacaacatc aaggagggag cagaggccgc tacgaagctg 60
tcgtgtagaa gctgagaaga tgggttcaac atcctgccct tctactaaat caggacacaa 120
agctggcaac tcgaatgaag ccggcataga agctcctatg cccaacaagt cctacatagt 180
gcctaaatct ggacgctcag ctcgagcttt tgggctcggc tcgcgctcgt tgcaactcgg 240
cccgagctag gctcggcccg tcaagtaaaa aggccgagcc gagctgtact tttaggcttg 300
tttcgacctc ggaccgagcc aggctcggct ggcccaacta gcgagctaaa agctcgcagc 360
ccagcgaagg cccaatgaac accacacacc acaatttagc ccatctagcc cagcaaaatg 420
actacaga 428

<210> 467

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-F11

<400> 467

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tccaaaacat gagctggttc tgctacaaca tgtgaacatg ttgtccaaga caagcatgac 120
cacaaagtag tcttataata aaacactact gagttcagga aagggaacca tcatcgagga 180
tttcgaagtc cttgcataag gcatgctctt aagaaggaaac ttttcctcct tgaacaattc 240
aatcagtggc ttggtgtgct cgggacacat atggaatgaa ggttgcaagt ctccagacca 300
cagaatactt cgcacgtatg catgactgac ttgggatgat tccagaggaa gcaaaaactaa 360
ctttcccaaa ttcacggcag caactttcac caaatgcacg tgtataagag gaagtcactc 420
ctttcatcaa acacag 436

<210> 468

<211> 431

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-F3

<400> 468

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aagcaccatg gctgaaggag ttgtaaggag gaattacacc acatgggatg atgagatgga 120
tggtgcactg cttgaggtgc ttgttgatca tcacaacaat ggcgaccatt cacaaaatgg 180
atggaaacca catgtgtatt gtgcagccat aaggaatgtg aaggagaagt gcaacaagaa 240
tatacacaag gacaacattt tgggaaggct tagaactttc gacaggtact atgaagtcac 300
taccaagata ctttcccaaa gtgggttttg gtgggattgg gtgaatcata agctatcaat 360
ggatagtgat gatgtctgga tcaaatatgt ggaggctaata aagaaagaga aaggattaac 420
ttcctacaag a 431

<210> 469

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-F4

<400> 469

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ggcgcccccc tatctcataa gctcctcgag tatcttctga cgtggactcc aagactccag 120
gatgataatc ttccaaaaaa tcatgttgcc gaaggtttca ttccgtttg actccgtttg 180
atattccttt tcttcgaaat acttaaacag gcaataaaac aacaatatgg gctgggcctc 240
cggttaatag gttagtccca aaagtaatat aaaagtgtat aataaagccc gtaatcattc 300
aaaacagata ataaaatagc atgaatgctt cataaattat agatacgttg gagacgtatc 360
agcatcccca agcttaattc ctacttgtcc tcgagtaggt aaatgataaa agaaag 416

<210> 470

<211> 421

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-F5

<400> 470

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aagctagtcc tctctctgaa gcagcagtgg acaacgctac tggattctat caaagcgact 120
 tgatagaaca ccatctgcc aacagccct atgcatctct cagacacata acagacgctg 180
 cagcaggatc atcttcagca cagccacacc tctactaggtt gatcatgaac actctcagca 240
 tcccacatct ggtgccctcg acattgttcc ctctacccc atctgcccac gagcttgctc 300
 cttacaatac atgogatcgt ccaagtgcac aattatccca cctgaccata gatccatcaa 360
 gcatataaat atttcgcata aaatacgagt caccttttct cctacacaga ggatatccat 420
 g 421

<210> 471
 <211> 414
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-F6
 <400> 471

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 tcgctgcgaa gtgctacccc accgccggcc aggccacact tccacacctc ttgttattct 120
 ccaccgacta cagccccacg ccacaccaga accacttata acccttgtag tctctcaat 180
 ctgcgactcc actgccgcat cttcccatct ccgggtcggt cctgtccggg gcctcgccga 240
 cgtccacggc ctgcgccgcg tcgacgtggc gtggtcaaca aacaagggtc tcggaagagg 300
 actatacgtg gagagcctga tggctgggac ccacaagggt catggttgca cgcaaggaaa 360
 gttcctcctt attaacccta gaagatgttt cctccccctg acagttggga ccca 414

<210> 472
 <211> 352
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-F8
 <400> 472

aatgcccggg tcgacgggca accaagaggg atttaataaa aacttcata tagagtgcac 60
 tgaatactaa gagaagtttg atacttgatg attgttttga gatatggaga tagtgatatt 120
 aaagttatga tagttgagta gatgtgaaag ttaaaaatac ttgtgttgaa gtttgcaagt 180

cccgtagcat gcacatatgg taaaagttgt gttacagatt tgacatatga ggtggtatatt 240
gatctgtcct ccttatcact ggcggtcggt gacgagcggt ggtctttttc ctacaactct 300
agccccctac gagaatgcgc gtaatacctg gcattctgact acatgtagat tt 352

<210> 473
<211> 293
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-011-Q1-E1-F9
<400> 473

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cccctacctc tgtcacgcct agcaaggcgg cctacaccga ggtgtcgtca cacaggacat 120
cgcccaatct gccacaagca caaggtggtc acatgacccc tccgggttct ccataccccg 180
ccttcgaaca gggccatgtg gacgagtcgg gcgccgactg gtgttcggcc ggaggagtct 240
gacgttttgg catgccgacc ctctatctca gaagagcatc acgtgttaat gca 293

<210> 474
<211> 433
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-011-Q1-E1-G11
<400> 474

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gtttgtagat tatataacca acgaagaggc tcggagtcgc cgccgcggag tctaactgtc 120
ttgtgacgaa aggcggtgtc ccccccaaa ctgtataaaa gtgaggaaga ttggtttagt 180
agtgcaggaa ttatggcgtg gcgtggcatg gcgcacccac cggtttttgt cgcagcggat 240
gtcgcccccc tgaagcagcg gctttgaatc gcagtcggga gtttgctang tccccccctc 300
ttttgacccc ccgaactctg tacagataga tgtggggagt tgatgatgac tggatgatga 360
tgcttttggg ttggttttct gtaaagaaca ccaattgtac agtcggatgg atacttgtgc 420
tagttctgca tgc 433

<210> 475
 <211> 177
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-011-Q1-E1-G12

<400> 475

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 cgaggaggct cggagtcgcc gccgcggggg cgcgctgtct tgtggcgaga ggcggtgtcc 120
 aggccaggc tgtatgaggg tgaggcagat tggcgtagt ggtgcaggaa ttatggg 177

<210> 476
 <211> 410
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-G2

<400> 476

cggtcacaaa ttaacgggtc gacgggtagg caacacaaaa gaaacgggtca tccagatcaa 60
 ggtgtgtgcg atatacgaca tgcgggtcac tcggatgaac tatttgcatt gatacaagag 120
 aacagaaacg gttcaatata acaaatacca taaatattgc aagggttcaaa ttcaaagatt 180
 acaatgccc aatttctgta aaggggtcag ctgttgacaa gtcatgtatg gggttgccac 240
 aatgacttcc aattactctg tcatatgctc ttccaatacg aagtttagct tttttggagc 300
 ctcttccatt ctacagtacc tgccagctct gatcaacata ccattcatct ttcctaatta 360
 aatgtgtgtt caacctcagt accctcaaca ccctttctct ggcaagaaag 410

<210> 477
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-G3

<400> 477

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 attctcggag gcggcccttt tcttaccatg ggaagaagg atgtcagctt ctcttccct 120

tttgtcttcg gaagagggag ccctagtctc cccggacaca gtgtgtgatt tgcctccagg 180
atggaggccg ccttcggctc caccgctctt ctcatctcc tccctccaccg gcacctggta 240
tggcgccggg accagcatcc atgctagtat gggactagct gagtcctcaa caagaggagc 300
cgaacacctg atttgctcag ccttctttat ccagccctgg aaaaagatgg ttttctcagc 360
atcttatcat gagatgtgta tctaacttgt gtttgagaat tgagtgttta ccgaggtatc 420
cggat 425

<210> 478
<211> 437
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-011-Q1-E1-G4
<400> 478

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tatgtgtttt gcttgagcgc tcattttatt ttattttgtt tttcttgctg tttaaataaa 120
atacaaagat ctgaaattct taaatgttag agagtcttca catagttgca taattattca 180
actactcatt gatcttcact tatactcttc ggagtagttt gtcgttgctc tagtgcttca 240
cttatatcct tttagagaac ggtgggtggtt ttatattata gaaataattg atctctcatg 300
cttcacttat attattttga gagtccttta gaacagcatg gtaatttgct tttgatataa 360
taaaaaaac tttcatataa gtgcattgaa aaatatgaga agtttgatac ttgatgattg 420
ttttgagata tggagat 437

<210> 479
<211> 390
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-011-Q1-E1-G5
<400> 479

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octatcacgg taggagacta cacggatttc ttttgttctg tgcaccacgc aaggaactgt 120
ggattcatct tccgtggacc acagactcca gtcaatccga attggtttca cttaccagtt 180

ggttaccatg gacgggcatc atctgtaatc atatctggaa cagacattat tcgacccaga 240
ggacaaggtc atccaacagg aagcgctcaa ccttatttcg gtccttctca aaagcttgat 300
tttgaacttg agatggctgc cattgttggg ccaggggaatg aactgggcaa acctattgat 360
attgctgacg ctgaggatca tatatttggc 390

<210> 480

<211> 399

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-G6

<400> 480

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atacctgatg gtcgccgaga tgtcgctagg tgggcgacgg gaggccggat ctgccacac 120
tacgacagcg aggaataaga ggtcggaggc cctccctcgc cagcgggtgct tgggaaagaa 180
cgacaaggaa ggctgatcgg gacgcgccca gcagtgggta agagccgtcg ccgaggacga 240
ccgcatgaac gttgcacctt ctcaccttcc ctggcagaga ggatccggat ggatctgtga 300
caagcgggtga gaagagagag agagagtgtg tggccaccgc tgctcgtgtt agatctggag 360
aggccgagac aggtgtgaag agagcaacac tagcaacca 399

<210> 481

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-G9

<400> 481

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agtgggtag acttaaagt tctagtcata ttcttcatga tgctctctt atgtttcaat 120
tcttatctt tatgtgagaa tcattgaaat catcatgcct agctaggggc gttaaagtt 180
agcgttgtt gggaggcaac ccaatcttat ttttgttcct tgctttttgc tctgttttag 240
taataaataa ttcataaac ctctgttttag atgtggtttt atgttttaat tagtgtttgt 300
gccaaagtag acctttggga agacttgggt gaagtctttg tgatcttgct gtaaaaaaca 360

gaaacttttag cgctcacgag attagctgcc attgtttact ggagagtgct tttaggttga 420
tta 423

<210> 482
<211> 423
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-011-Q1-E1-H11

<400> 482

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acgcccagga gtagtttagg aggatccan gcangaggcc tgtgcctctt tcgatctgta 120
tcccagtttg tgctagcctt cttaaggcaa acttgtttaa cttatgtctg tactcagata 180
ttgttgcttc cgctgactcg tctatgaccg agcacttgta ttcaagccct cgaggccct 240
ggcttgatt atgatgcttg tatgacttat ttatgtttta gagttgtgtt gtgatatctt 300
cccgtagtc cctgatcttg atcgtaaca tttgcgtgca tgattagtgt acgattgaat 360
cgggggcgtc acacgatgag cctccccact tgcttggtta aatcgctttt tccccagcg 420
ccg 423

<210> 483
<211> 471
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-H3

<400> 483

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aatagcccaa acggcggggt tatgtccaag aatatgcatt ttcattctat gcttccaact 120
agcaaaattt gtaccatcaa agtaaggacc tctacgggtg taatttccct cgctagacgc 180
catactctcc taggttgta aaccaaggct atgaccaaca aaagctatgg aaatcaaagc 240
aatggagac caaggctctg ataccacttg taggatcgaa agtatgtcta gaggggggtg 300
attagactac ttgacaaat aaaaatctag tcttttccca attttagttc ttggcagatt 360
ttagcaactt agcacaagtc aagcaatcaa cctacacatg caattctaag agtatagcag 420

cggaatataa agcaattgca tatgaaggta aaggggaagag aatgggggaa c

471

<210> 484

<211> 431

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-H5

<400> 484

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aaaatgagct cgtgtgcat cttgcgaggc atcaaaaccc aatcattttc gttcgtatgt 120
acatcccaca tggatgaatcc cagaaaaaca tttatgtttg tatgtatatc aaacacagtt 180
ttttgtgttg aaacgtttat gcaagggtggc ctaatgcaaa cagttatctg ccagaagttg 240
tgtgtgattg ttatttgatc gaacacgact actttctaga aacctatgctg gttgtttgag 300
ttcatcgctc atggtgctat ctgagtaacc gtatgcaata gcaaacccca ataagtaggg 360
taattagctt attattgata atccatgtag taatcaaatt gacatttctt atataacaca 420
ccagatattt c 431

<210> 485

<211> 398

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-H6

<400> 485

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gctatgtgca ttcctcaatg caatctctca gaaggatgac gatccagaaa tcataccaag 120
gctaaggaat gatgtggcgc aatgtcttgt cagtttcgag ctggtgttcc caccatcctt 180
cttcaatatc atgacgcatg tcttagttca tcaatcgacg agattgtcat tctagggccc 240
gtattttctac acaatatggt cccctttgag aggttcatgg gagtcctaaa gaaatatgtc 300
cgtaaccgag ctaggccaga aggaagcatc tccatgggccc atcaaacaga ggatgtcatt 360
gggttttgtg ttgacttcat tccctggcctt aagaagat 398

<210> 486
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-011-Q1-E1-H7

<400> 486

taccagtcca gaattcccgg gtcgacgggg ctagcctcgg gatccatcca tccgcccctc 60
 gctgccgctg cgtctcgtct ccaccacca acttgcccc ggactcagga ggatcgtcgg 120
 agatgtcggg caccgatgag caccacttcg agtccaaggc cgactccggc gcctccaaga 180
 cctaccgcga gcaggccggc gccatccgca aggggtggaca catcgtcac aaggcccgtc 240
 cctgcaagggt tgttgaggtc tccacctcca agactgggaa gcatgggtcac gcaaagtgtc 300
 actttgttgc cattgacatc tttaatggaa agaagcttga ggatatacgtt ccttcacccc 360
 acaactgtga cgtcncccat gttgaccgcc aagattatca gctgattgac ataactga 418

<210> 487
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-A1

<400> 487

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 ggcggacaag tcgggagctg ctgtgcgaga acggacctga gctgtgtgcg gtgggtgcat 120
 aaggagccta tccatctcca ctagaattat cccaagtttc acttcacatc gtgatgttgt 180
 tttaaccttt tctgtcatt gtctgtctat aacggatagc gctccctgtt ggcgccggcg 240
 ccggcgggga tgccttagtg gtggagggtg tatgtcctct tccgcggggg gccctgtctt 300
 gtacctagat gggtactctt tccgtccatt gtcaccggct aacattgtga taatatcagt 360
 ctgggtaatg ttagattaag ctgttgcctt cgcctgaaaa aaaagaaggg gggg 414

<210> 488
 <211> 378
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-A4

<400> 488

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atctctgaat tgattattgc tgaccatttt tgctaccata ttataagcct tcccagctcc 120
acatacatct acgtcggtgcg gttgagtctc cctggtaatc gctctatcca agctttgaga 180
gtttttgact acaacgattg ccgatcaccg cctgctgctg ggtaagaact ggtaagaatt 240
tgagatttgc ttgacggatt tgtgacaccc accaccacct cttggtagta gtctgtagga 300
tcatattctt gtgtgtttct attgctgcta accatgccag gatcacaagc cgatgagact 360
gactgggaga acatgacg 378

<210> 489

<211> 368

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-A5

<400> 489

gtcaagaatt cccgggtcga cgggcctggt tggggatgcy tcctccgttt ggcgctgctc 60
ggccatggag cttcttagcc taccatgaac gatgaatgac tatgatttac cctacggcac 120
gaaggaatgt aggaaggagg aaaacgccac cggcgatgga taaatcccc ataatcgga 180
gtcctccac gtcccaagg atggatgacg tccatcatta tctaattgat aaatgagccc 240
cttggtgggg tactaagatc acacttacct caatgacgat caggaattac gatggcaaga 300
acgccgaggc ggcccaagag ttcaggaact gccgtgcgtt cacatgagag agaccatctg 360
tgttttatc 368

<210> 490

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-A7

<400> 490

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tctgaagcac agcctgaaga ggaacttata atctctgcac caaatcaacc tgaagacaat 120
gctcagaccg aagacaatcc tcccaatgat gacaatgatc agcaagagca aagtcttcat 180
cctgttcatc ctogtgttgc aaatgaagta caaatcgaga agataattga cagcatcaat 240
gcgctctggc cgcttactcg ctcaagagca acacagctag caaacttcta tgggcacttt 300
tcatttgtgt caatatcaga acccaagaaa gttgctgaag cttttatgga acctgaatgg 360
attcaagcca tgcaagaaga attcaacag ttcaagctga acaatgttcc ggaa 414

<210> 491
<211> 449
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-012-Q1-E1-A8

<400> 491
ggataccggtc aggaattccc gggtcgacgg ggacagaact cctgaaacaa tcaagagtca 60
cacagcccta gcaagtttag cagatccaga gccgaagatg agcggggtga agaaggtgac 120
ggacgttgcg gccaaaggccg ggaaggcgat cgactgggac ggcttgcca agatgctcgt 180
ctccgacgag gcccggaagg agttcgccaa cctccgccgc accttcgagg acgtcaacca 240
ccagctccag accaagttct ccaggaacc aaagccaatt gactgggaat actacaaaaa 300
gggaatcaga tcgaaagttg tggatatgta caaggaggct tatgatagca ttgagatccc 360
aaagtatgtt gacactgtca ctctgagta caagccaaag tttgatgctc tggttaatcga 420
aatgaaggaa gcagagaaga catctctga 449

<210> 492
<211> 392
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-012-Q1-E1-B2

<400> 492
tgccagtgcc ggtcaagaat taacgggtcg acggggggtg tcagcagcaa caattaattc 60
atztatccgt ggaatgggga taacaagatg tgacaatagc ttaattcctt tcggacgtct 120
tgaatatcac atcagagaag aacttaacat aacagcttct cgagccatgg ttgttctgca 180

tcctctaaag gttgtaataa ctaacttgga acatggaaaa gtcataagacc ttgatggaaa 240
 taagtggcct gatgctcctg ctgatgaacc ttcgtcgtag tacaatgttc ctttcacaag 300
 aactgtctac attgaaaaag ctgattttcg cctacatgac ccgaataact attatgggct 360
 agctcctggg aaatctgacc tgctaaggta tg 392

<210> 493
 <211> 397
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-B3
 <400> 493

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 atgcagaggc ggcggcaggg cccttgggtg gaagaaatga tgcgtgataa ggcaccaacg 120
 agctcatccc catgattgag gccgcggcag tgcaggttga gaggggaggga acgccagagg 180
 tggcgccacc gggacgcgag gatctgggtg cgggcgccgt ccttgggtggg gaggagcgag 240
 atgatctcgc cgaggacggc gtcggggagg ttgctgatgg tgtcttgagc cggcggttca 300
 gattccgcca actttcttct tcgggtaata gggccgccgg ccggcggcag tagcggaaga 360
 ggctcgcgcc gcctcatatc tcagatgcgc accgcaa 397

<210> 494
 <211> 406
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-B4
 <400> 494

gggtcgacgg gtccgccaac ggccagccga atcgacggag aaggaatggc ttcaaccagg 60
 ggagacgtag gatgggagtt cggccaaggc gaactgatag ggaggatagt gtacggcgaa 120
 ctgtctatgt ctcagacatt gatcaacatg tcaactgaaca gaagcttgct gaggttttct 180
 caaactgtgg tcaagtggta gattgccgta tctgtgggtg tccaaactca gtgatgcgct 240
 ttgcttttat cgagttcgcc gatgatgtct gtgcaagagc agctctaacg cttgggtggaa 300
 ccattcttgg tttttatcct gtcagagttc tgccatctaa gactgcaatt ttgcccgtga 360

accccaaaatt tcttcctcga actgaggacg acaaagaaat ggtatc 406

<210> 495
 <211> 424
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-012-Q1-E1-B5

 <400> 495

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 catgcctcat gggaaagatg actaaaacgc cgttctccgg aactatggag cgagcaactg 120
 atttgttga aatcatacat actgatgttt gtggtccaat gaatgttgag gctcgcggcg 180
 ggtatcgta ttttctcaca ttcatagatg atttgagcag atatgggtat atctacttaa 240
 tgaaacacaa gtctgaaaca tttgaaaagt tcaaagaatt tcagagtga gtggaaaatc 300
 atcataacaa gaaaataaaa tttctacgat ctgatcgtgg aggagaatat ttgagttacg 360
 agtttggttt acatttgaaa caatgcggga taatttcgca actcaggcca atccggacaa 420
 caaa 424

<210> 496
 <211> 428
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-012-Q1-E1-B6

 <400> 496

ttcccgggcc gacgggcata caaagctagg aaaaaaatta gggccatttc aaggatgttg 60
 agaactaatg tgctctcaga cggagccttc tgaacttccc aaacaccctt cattcaacat 120
 ggtctatfff taaaatcctt gaaatttgca agtaggtggg catgcccatt gtaggcctcc 180
 atgtcagatt tgaacgatff ctacaccgtg tgcaagttgc gacacgtcca accattttatc 240
 tgcttttttt atcaagaaaa ctctagaaaa taaaaaatt accaaaaata gaaacaaggc 300
 atgatgcctt aaattgatca tacaaggcca tggggagaaa tggggccatt ttaaagatgt 360
 caaagaacaa cgaactctag gacagagcct tctcgccttt tgacaccatt tgcaagttgc 420
 gacacatt 428

<210> 497
 <211> 369
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-012-Q1-E1-B7

 <400> 497

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 cggcgccgcc gctgcgacaca gaacacatcc tcgccagcgt agcttctccg gcgtccggcc 120
 aacgcgctca ctagcctccc gccttctctc acatctctct gcctccaccc catccagttc 180
 gtgccattcg ctgctccaag acaagggcat ggcgctcggc ggctgcggca acgaagctga 240
 tgggtgcacga gccaaacctg aaggcagtag cacggggcag cgacagcagc atggagggcg 300
 tcctcttgtt tgggaaggta atggaactgc aaataggagt ggcagcggcg accaagatgc 360
 aaatggaag 369

<210> 498
 <211> 426
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-012-Q1-E1-B8

 <400> 498

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 gggcagccac ggcgggcgcg gtggcgggcga tcaaggcgtt ccagaacagg atggacggga 120
 aattctgcga tacctatgtg tgaagcgtgt gtgttcaaga aaacatgccc ctttctctta 180
 actgtacatt agggtagtgg aggcccaataa cactaatcgg tgagagtttc agacgacggc 240
 gacgacgacg accggggcgcg cacaaccgcg tgctccgagt ccgtgagaga gaccagcaac 300
 aaggcggggag cctccgagga gcggagctga caagttttgc atttcaaaaa cagctcagat 360
 cctgcgacga tcgcgatcgc gatcatcggc ggtcncttcc ttgcggccct tccttccagc 420
 aagctg 426

<210> 499

<211> 420
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-C6
 <400> 499

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 caacgatagt aagctccaaa acatgagctg gttctgctac aaacatgtga acacgttgct 120
 ccagacaagc atggccacat agtagtctta taattaaaca ctaccgagtt caggtgggga 180
 accatcatca aggatatcga agtctttacg caagtccatg gattagatcc caagcataga 240
 cttcttttcc ttgaacaagt caatcagtgg cttagtgtgc tagggacaca tatagaatga 300
 aggttgcaag cctccagact acagaataat tcgcacgtgt gcatgactga tttgggatga 360
 ttccaaagga aacaaaacaa tcttcctcga attcatggcg gcaacttaca tccggtgcac 420

<210> 500
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-C8
 <400> 500

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 cgagtggcgc tgatggtgaa ggtatgacca atgccatcca ccttggagga caccttcttg 120
 gccacaggtg gagctgccat tgcattctta cacttgccgg tggagctcga tgggtgcatcc 180
 gctacagtag cgcagcactc cgaataggtg cgcttgccag agtgggcatc aaagctcttg 240
 ccggacatgg tcttcttcga ccggggagct tcaccagcaa gtatcttgct ctctgcagct 300
 gctgctgctt cccggtagac cttgtcggca cacataatag catccttctt gttgccactg 360
 acagagatga cacttattgg gcctgacatt ttcaatacgt gctacgcata gtgagaggct 420
 gccatg 426

<210> 501
 <211> 395
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-D1

<400> 501

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cggctcgcag atcttctccg agggcggcct cgattacctt ggaaaccca acctcgtcca 120
cgcgagagc atccttgccg tgctgggctt ccaggctcct ctcattgggtc tggttgaagg 180
gttccgcac aatgggtctc acgggtgctg cgagggcaac gacctctacc ccggcggcca 240
gtacttcgac ccgctcggcc ttgccgacga ccctgtcacc ttcgctgagc tcaagggtga 300
ggagatcaag aatggcgcgc tcgccatatt ctctatgttt gggttcttcg tccaagctat 360
cgtcaccggt aagggcccat tggagaacct gttcg 395

<210> 502

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-D3

<400> 502

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cgttcattgg taactttact tggagcaata tttttatttg ccacatgata tgtgttttgc 120
ttggagcgtc gtgtattata ttggtctttg cttgttagtt taccacaatc atccttgctg 180
taacacacct tttgggagaa gcctatttga ttagaatttg ctagaatact ctacgtgctt 240
cacttatatc ttttgagctt gatagttttt gctctagtgc ttcacttata tctttaagag 300
aacgacggcg gtgtcttaat tttgaagaaa ttgctagtct ctcattgctt acttatatca 360
ttttgagagt cttttagaac atcatggtat ttgctattgt cataaagttg gtcc 414

<210> 503

<211> 425

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-012-Q1-E1-D4

<400> 503

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 tggcgttggtt ggcgtctaga agcttctagg tgaggcggca ccgccttcta gggatcatggc 180
 tgccgtgccg cgctgcgccg cccgtcggaa ttcatttcag tcgatccatc aaatccgttc 240
 cgttccttcg ggtgacattt tctatttcct gtgttcgttt gtagtagtag tggatgataat 300
 aaaatgacgg tctcctcac tgtggtgcaa gagagtggag agccctccct agccaggcag 360
 gtcctcttc ttctgtgtac aaaggcttga acttgaagtt ggtactaaat aaataaaacc 420
 caagc 425

<210> 504
 <211> 399
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-D5
 <400> 504

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 tgtcatattg ctttgcata tcgtaagata gctagcatga ttttttatg gcttgtccat 120
 ttttgatata tttggtacgc tagatcattg cacatcccg tacaccaccg gaggcattca 180
 tatagagtca tactttgttc tagacattga gttgtaatat tgagttataa gtaataaaaa 240
 gtgtgatgat catcattatt agagcattgc cccagtggag aaaggatgat ggagactatg 300
 attcccccat aagtcgggat gagactccg acttcacaaa agaataaaag aggccaaata 360
 agcccaaata aaaaaagag gcaaagaagc ccagcgaaa 399

<210> 505
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-D6
 <400> 505

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 accatctcct ctgtctgaga tttaactcct tctgcgtgaa aatgtacttc aaactcttgt 120
 gatccgtgta cacctcacia tggtttcoga tgagaaaatg tctccatgtc ttcaatgcat 180

gcaccacggc tgctaattcc aaatcatacg tagcataatt cttctcatgg ggtttaagtt 240
gtcgtgaagc atacgacaca acttttcctt cctgcataag cactgctcca agtcctcgac 300
gtgaagcgtc gcaataaaact tcataatcct tgcgttgatc tggcagaatc aacactgggtg 360
atgtaaccaa tcgtttcttc aactcttggg aactagcttc acattcctca gtcgaattga 420
atttggtgtc cttc 434

<210> 506
<211> 354
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-D7

<400> 506
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caagtgcgag gccaaagacca aggccaggga aaggctcatc gccaaaggagg ctgcgcagag 120
gatgaactaa gcctagccct ataagtattg tcagagcata tgccatgtag tttccctttc 180
agtctgtcct gattttgacg aggaactcga acccttttag cagcactgtg gaatcgtatt 240
gtgggttttct gattcgtctgt tccgttctcc agacttctgc aaagatcaga tgagggtttac 300
ccatgtttgg attctatata gttttatgtc ctttgtcgag tcaaaaaaaaa gaaa 354

<210> 507
<211> 401
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-D8

<400> 507
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agtgttgggc acccacacgc ggcgcttctg aggaccagca ccggatgagg aacccatgtc 120
acggccatgc ttgcgtgttg catcataatc agtctgacca gtttcagcac tgatggcctt 180
gttaacaagt ttctgaaagg atgtgcactc atgcagacgg aggtcgcggc gaagctcagg 240
actaagcccc ttacggaacc ttgcttgctt cttggcatcg gtagaaactt cctcagtggc 300
atatcgtgcg aggttaccaa actccctgct gtaagcatcc acacagagtc ggccctgagt 360

gagactgcaa aattcctcac gtttacggtc catgagaccc t 401

<210> 508
 <211> 401
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-E1

<400> 508

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 gggcaccatg gtcactgtgg gagcacgcc aaccgaaggc catcaccagc cactggatag 120
 gtgagcaaat ccattctcct atcagattca gatatctttg ggtagtcaag gtaaattcctt 180
 tatgcttgag ggtaccataa ataggctatt gattgaatga aacttgtggt tggctgctat 240
 tgtgttggtt gatgtttggt tcagaggaaa aattgcattt atttatatag aaggtactta 300
 gtaaaattca gtctgattta atcatcactt cagggttatg tatctctgta cgtatagatt 360
 tccatgttta gagaaaaaac tgtatgttaa aacaagatgc t 401

<210> 509
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-E2

<400> 509

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 acgggaataa gttcatctcc aacaatgatc atcagaacgg acaccttcaa ctgtccacgg 120
 gcatctggcc agatgccggt catccaatgc taacgttcag gatttctcct gttgaaccta 180
 ttagctagta ggtttttcga atgggcgatt gcctaacttt atcatataga tagaagagag 240
 gtacagtctg gttatcagtc taagcgtact agatctgatt actgtctaaa gcagccattt 300
 acagccttac aataggaatt atacatgtac ttccggtgct ctacactat gctccgagct 360
 ctacatgtca accggccgca ctccaaatag caatatcttc acagacgaaa tccagcacc 420
 tgtcggagct gcttgccatc tgatca 446

<210> 510
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-E3

<400> 510

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 cacccttgcc gttttattcg cctctctttt cccaatctca tcctctcttt ctcttttgcc 180
 tttttctcgt ttgtcttttt gttgcttggt tgttgatta cttgttacca tggccgaatc 240
 aaaaggaact aagggatttc tcccgagttc tagtgccttg gataaccttt ctatcctttc 300
 taagctcata aacaatgatg ctacagagag acccaccggg atcaccaata agaatttaga 360
 tgattttgat gatgatgact ccggaatctt tcgctattta cttgatgaat ccttaaa 417

<210> 511
 <211> 408
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-E5

<400> 511

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 attttgagag tcttataaat agtatggcag gttgcttggg ttatgaattt agtcctaata 120
 tgatgggtgt tcaaggggga tataataaaa actttcatga agatcattga atagatgaga 180
 agtttgatac cttgcatttg ttttgcgata taaagatggt gatattagag tcatgctagt 240
 gagtaattgt ggtttagtaa gaatatttat gttaagggtt gtgattcccg aagcatgaat 300
 gtatggctctc tcgttatgct atgaggttgg agcatgattt tttattgtct tccttatgag 360
 tggctattgg ggacgagcga tggctcttttc ctaacaatct aaccccct 408

<210> 512
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-E6

<400> 512

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tgaggaaatg agagccatca tcgaagttat agctgagacg gggaagttct ggcacgactg 120
gagttttctc aagagattgt tgtctctcca attgatgcag gtcttgggtg aatattctga 180
ggctcaaatg gcaatccaag aggacgggca gcaacagaat tccttattta gagagacgca 240
ctcagagctg tttagccagc tcaatgatgc tctcttgagg tttgaagagg gtctctcggt 300
tacacttcaa aggctttgtg agattttggt ggatccaaaa ggaacataca caaaattgtc 360
gaagcttgct ttggccttgg agaagaacct cctagtcacg tctaccataa ctaagtgtac 420
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<210> 513

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-E7

<400> 513

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gtataccact tcgtcatcag gtgggtaccc atctcattat ctccctcggg cataagtggc 120
acccgacggg gtttccgaaa agtcttttga aaatactttg tctccatcac catgcacatt 180
cccgctccctt attgtgtagc aactacttta gcatcctatc tactcccacc ggcataaacc 240
tcataagaag gtagggcatc gcacaatgca agtatcaaca atgaggaaat ggaggcaacc 300
caccaaagtg gctaccatct catcatgatt ccgatgcaac aataataaag tgctatatga 360
aatgcataaa aatgggtttca tagacatggt caaagggctg cttg 404

<210> 514

<211> 375

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-F1

<400> 514

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gaagacgctg ctgttccagc accgggacaa gaagctgcct tacaagaagg tgggtccagct 120
ggcgctggac atggcgagag ggctgagcta cctgcacgcg cagaagatcg tgcaccggga 180
cgtgaaggcg gagaacatgc tgctggacag gaagaagtcg gtgaagatcg ccgactttgg 240
ggtggcccggt gtggaggcgc aggacgacga caacatgacg gggcagacgg gcacgctggg 300
gtacatggcc cccgaggtgc tggaggggcg gccgtacgac cacaagtgcg acgtgtacag 360
cttcggcgctc ctgct 375

<210> 515

<211> 388

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-F3

<400> 515

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tcgagaacat gatcaggggg aaacaagctg agcgctacgg cctatgtgac aagctcgctc 180
atgctcagag cctgaaggtc gtggaaggcg gatccacctc gctgaacaac ggtctggacc 240
tcaaacttgg attcaactag gaacgggtga aagcttctgg ccggtggggtt ctgctctagt 300
gttgctgttg agctcgagtg ttatgtcagg ttcaaatatt ctgcaatttc cttcgaaggg 360
attgtatgaa cttgtaagag accactgt 388

<210> 516

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-F5

<400> 516

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ttactaatcc ttccttgatg gattgcattg acgaaagtga ggggtctaata gaggaagtaa 180
atgaatttga gtcttttatg agtaagctca agggaaaatc caagaagcac ctcatgtgctg 240

tcttgaaca acttggtgaa gccaatgaca tgattgaggc tcaggaagac accatctata 300
 agatggaagg tcatagtcgt gactgtgcga tgagatatcg gatctctcca atgctcttgg 360
 ggaagagcgt gttcatcatt tgactcttga ggagtcacac aatgatgacc atgccaaatt 420
 aaagaaag 428

<210> 517
 <211> 461
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-F6
 <400> 517

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 agatggcccg gaagggagggc aaggggctgc ttgcggcgaa gacgacggcg gccaaagggcg 180
 ccgccgacaa ggacaaggac aagaggaagg cgctctgtgc ccgctcgtcc cgtgccggga 240
 ttcagttccc ggtgggcccgt atacacaggc agtcaagca gagggctctg gctaattggcc 300
 gtgtgggtgc cactgccgct gtgtactctg cagcaatcct tgagtacctc actgccgagg 360
 tccttgagct ggccggcaac gccagcaagg atctcaaggt gaagcgtatc acccctcgcc 420
 aactgcagct cgcgattcgt ggagacgagg agctggacac c 461

<210> 518
 <211> 405
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-F7
 <400> 518

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 gagatgaaga agaaaatgga ggttatgctt caaagtgtag tgaaaattga gaatgcttgc 180
 ttcagtggtc atgtgagagg atctgaatac atccctatgc tgggaacatc tggcgagtca 240
 gactacgctt tcttcgggtgc cgccgattat gaccaatgaa gccagactgc ctaacaggca 300

tgtttctggg acctatctca aaaaagaagc tttgaacacg actattatct gttgcttggtg 360
cacatcacac cgtagaacat gtaatcccg ccctcagcta cctgt 405

<210> 519
<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-G1

<400> 519

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acacgtgtga gggcgacccg gaggacacgg tgagcgatat gtccgattga gctcgtgctt 180
ccttgctggt gaccctacat gtgaaagctc gggcacggcc ctgaaagttg taagagcatt 240
ttgggagggg gagccctca tgtaaataga ttactgcctc tattccttaa gccaaagctgg 300
agatttattt ttatgatccc gcgagtcctg ctgcgagctt actactgcaa tttaccttat 360
tcagggccag ttcccgaactg gctcatgacg tcgtgagctt tttagggggc tgctg 415

<210> 520
<211> 398
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-G3

<400> 520

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tggtgaaaaa gggcggtcag ccggccatgc cggcatatat gggtcggcgc gttgggcaca 120
ctgccgaccc aaatctcaa tgggacggac gccgagcggg tgaccaccca aacggataaa 180
aaacggacaa aaacaccgtc cgtttggtcg gcgcgttgga gtaactagtt caacttctcc 240
gaagagagcc taacgcccac aagagcatga cagacgccac ggcgacacac caaaggccga 300
atcccttggt tgccaggccg ccccatgacc cttcgtgctc agccttggtg tagcgccgac 360
gaaggacatc atcaccagag gagcctgccc tgctgctg 398

<210> 521
 <211> 374
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-012-Q1-E1-H1

 <400> 521

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 tacctgaccc tatgctttgc cctggcctca tctgccgtgg gtgcttacct gcacattgcc 180
 ctgaacatcg gtgggatgct gacaatgctc gcgtgtgttg gaaccatcgc ctggatgttc 240
 tctgtgccag tctatgagga gaggaagagg tttgggctgc tgatgggtgc agccctcctg 300
 gaaggggctt cggttggacc tctgattgag cttgccatag actttgaccc aagtatcctc 360
 gtgacagggt ttgt 374

<210> 522
 <211> 385
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-012-Q1-E1-H3

 <400> 522

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 gtccaaggac ggaggagaag ccatcggcag gcgacatcgt gtcgatggtg atgaagagga 180
 ggcggtcgat gccaaaggagc gaccagccct ctgaagctgg gcgcgtaaaa gcttctggtg 240
 ggatttttgg atacgtgcga gaatccagtg gtaaacaaga gaaggagaag gagggcctgg 300
 catcatctgg ggagggggag aaaacacaga gcaaagggtg ggtgggtggct gcttcaaggg 360
 gtgctgcaga tgcgccggtt tctgc 385

<210> 523
 <211> 422
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-012-Q1-E1-H5

<400> 523

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cgcatggtct ggcgtttcag ttttagccgt gtcaacagga aataatattg ctctgagaga 120
gtcctaggat agagtgagtt tccacctgta tgatatatcg agtctattgg gaataaatat 180
gaggcttcga atttaattga gcgatcactc cgctaattct gggctcgtca tagcttctgg 240
agagaatttc ggataagtgc tataatccac tggaaaacac tagaaggaga aggaagatct 300
gacatcaact atcgagaggg agaaaataga gagcatttgt gtcgtgctag ttgcttaaca 360
gtttccagga gattcactag tttcagcaga gcatgcgttc acagtttgtt ctgcaaatat 420
tt 422

<210> 524

<211> 406

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-H7

<400> 524

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aatatctggt gcagccgctt ggccgtgctg aagacgaaga gcattccagt gactttgagc 120
cagaagaaaa tggatgatgg gctgaggacg aggagattga ggatgatgat gctgaggatg 180
gtgaggattc tgtcaaggcg caatcctctt cgaagaggaa gaggtctggc gcggaggatg 240
aatatgatga tgacggtgat gatgatggtg atgatgatga gaagcctcca tcaaagcgat 300
agtcaatttg ttcttgctga tctggtatct tttctgcttg ggccaagaag gaaaataatc 360
ctcacggaga gggttggttg taaatgctgt agcttttagga catctg 406

<210> 525

<211> 396

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-A1

<400> 525

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atctactagt cctcatgcaa tactcatata ctttttcagt atggaacata agacaatgtc 120
atcgatttct taaactattc agcacattct aaaagggtgcc catgtatatc aatcttcatg 180
acatctgctg tatgttgta gtgtccattg caacattacc ctactcctga cgcactatgc 240
aatcgatcac cagtagcatt tttggcaaatt attcaatgga atataccagt gggtcacttt 300
tgcaagcagc accattatca gcttagacta gtcataagct actaataggt agtccaccat 360
taatagtttt ggggagttga tctacaagaa gagtta 396

<210> 526

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-A10

<400> 526

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ttttaattca aaaacaggat cacctttagg tggaggagga cctcctagag tttcaatacg 120
caaattgtgt ttaagtagag gacgttggtc aaagaaaata ttatctatct catttctttc 180
atgcatatgt aaatcatctt catgatcatt ttcaagggtg gataaaagtt atcttctcca 240
gatcctcaac caccatctta atctgatgat aactagaata agtatccagg aaacatagcc 300
tctcacaacc cgtcgttaca tcaataatct ggtcgataga gggaagagaa aaaggatcag 360
ctagacacgc cttattgaga tctgtgtaat caacacacat acgccacgtg ccattctttt 420
ttagcacaag ca 432

<210> 527

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-A2

<400> 527

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ccgacgatca tcatatccga aaacggaatg gaccaacccg cgaacctgac ccgagaggag 120
ttcctgcacg acgcctccag ggtcgagtgc tacaagacgt acctcgcgga gctgaagaag 180

gcgatcgacg acggcgcgaa cgtggtcggc tactttgcgt ggtcgctcct cgacaacttc 240
gagtggctgt cgggctacac ctccaagtgc ggcacgtgt acgtcgactt caccaccctc 300
aagcgggtacc ccaaggactc ggcctactgg ttcaagaaga tgctgcaggc gtcggggccc 360
ggctcctcga aagacggcac ggttacttcc ggcggcactc aggctggctc cggcgtgtca 420
ggcagcaac 429

<210> 528
<211> 461
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-013-Q1-E1-A6

<400> 528
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ttttttttat tcggaagaat ggaagcatta gttctgacgt tgtaggctgt acctaagatg 120
ctcatctctt cacatgtaga caattagaca aacactgtag ctctagcatt tgcttgtttg 180
tttagggctt agctgccttc ataattattt gattgatggt ttattggat attcatattt 240
tattttggag aagctgcata tggtgcttga tcaaactcca tgaattagat aaactttcca 300
atttgataga gtaaatecat ccagtttatt acagcccttc ccattcaatt actcctgtat 360
gctaagtggg aattgatcac aatatagcgt cttgcgcgtg tacatcgaaa tggcgtcttc 420
agtgttgctg ctgctttggc tcctacacaa ataattgggt t 461

<210> 529
<211> 448
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-013-Q1-E1-A7

<400> 529
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gcaatggata ttgtttcgtc cacaatgggt ggatgttccc taccgaaaac catcatgctt 180

gttgtgagaa gctccagtta gtgaaaagca tataccaaac ctgccccaaa tgggacaaaa . 240
 tttgtaccat ggcatgttga tgccgctcca tgatagcatg ccaagttcca tgaatttcag 300
 acgagttttg gatttactag aatttaaaaa tcagacatct caatgttttg ccggcaatea 360
 acggtgccct ggtgtttgaa attcattcnc atttcttgca tgggacctaa gcatgcaccg 420
 aaggacacaa atttgatttt tcaaccaa 448

<210> 530
 <211> 443
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-A8
 <400> 530

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 agttcccgtt ttcaggtgct atcggatgac gactccgagg ccgactcctc tcaccaaggt 180
 gaggaggaga agaaaaaggc ctctcccca gtgggggaga gaagaaaagg aaggcctccc 240
 caacgaggga ggccgaaggg tgcaagaagg gaaaaactct tccccgggac tgctctgcca 300
 acgccagtga cgacgacaag gactggcctc caagggccaa gcccctggcg agatcgtgag 360
 tatccggact cccgaataac ttcattggtt ttcttttttg ccacacaatg tctttctaata 420
 gctgcataca accctgcaat ctg 443

<210> 531
 <211> 367
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-013-Q1-E1-B10
 <400> 531

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 aagccaagaa gagcgtggag acgttcaaga tctacatctt caaagtgctg aagcaagtta 120
 ccccgacatc nggatctcct ccaaaggcat gtccatcatg aactccttca tcaacgacat 180
 cttccaaaaa ctccccgcg aagccgcca actggcgcgg tacaacaaga aaccacccat 240

caccttcccc gggattttaa actccgttcg cctcgctctc cccggcgaac tctccaagca 300
 cgccgtctcc gacggcacca aagccgtcac caagttcaac tcctcgtaga gtgctcctgc 360
 tcctgtg 367

<210> 532
 <211> 432
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-B11
 <400> 532

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 gaggattttt ttgaggaaag ctgtaagcaa caagtcaaga agagaaatgg tttcaciaag 180
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 ttgaagtatg gtaaccaa atagacataat gagaaagcta gtcttgaacc cagtaaattg 360
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 cttgattttg ag 432

<210> 533
 <211> 405
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-B2
 <400> 533

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 atgagcgcct tctaagactt cctcaaaaata gtgctcggcc gatacccgcc ctaccgccga 180
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405

<210> 534
 <211> 427
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-B6
 <400> 534

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 tcagcttatg cgtaaggccc ggttcaatgg tgggttctat gtcattcatg aggcaaacc 180
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 catcaacatg ctccacatgg tcgatccata tgttgcataa gggtagccga atctaagtaa 360
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 gaccaac 427

<210> 535
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-B7
 <400> 535

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 gctttttttc acgaagaaac caaaaaagat ccagaaaaca aaaaaaaca aactaaaaa 180
 aaggaaaccg aaaacacgga aacttgtgca tatttgtgct tttcactctt tttcggaagc 240
 acacttgtgc tttttcactt ttagagaagt acatatgtgc gtcaccatga agcacatatg 300
 tgcttttcac ttttcggaaa gcacagttgt tgaaagcata actatgtttt tttgactaac 360
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<210> 536
 <211> 406
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-013-Q1-E1-B8

 <400> 536

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 tgccatgtgt catgtgtgcc ttgctctcag caggggaagtt gagttgttgt atgttgtgta 180
 acagaacgat gctttctgcc tgtggatgta aaacataaga ttgtctatgt gtcacgactc 240
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 tatgtgcttt tcaacttttcg gaaagcacag ttgttgaaag cataactatg tttttttgac 360
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<210> 537
 <211> 451
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-013-Q1-E1-B9

 <400> 537

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 agctagtcca ccaacaatga aaggaaggag ctacaccgtc ttgaattaca acaccgaggg 180
 gaggaaatcg tctcgtgcc atggatgaat ctctgaaaga actaacgcac acgattagtc 240
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 gaatgtattt gactttttga gccttggaat aattgagtgc gagagagaaa atttctcgac 360
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<210> 538
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-C10

<400> 538

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tattattcat gctagaattg tattaaccgg aaacttgata catgtgtgga tacatagaca 180
aaacagagtg tccctagtaa gcctctacta gactagctca ttaatcaaag atggttaagt 240
ttcctaacca tagacatgtg ttgtcatttg atgaacatga tcacatcatt aggagaatga 300
tgtgatggac aggacccatc cgttagctta gcataatgat cgtaagttg tattgctatt 360
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<210> 539

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-C11

<400> 539

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gtaaggttcc cggagtctac gatgactggg aggagtgtcg gagacagggt caccgattca 180
acggtaacag ttacaaaggg tacaccacta gggccgaggc cgaatctaga tacgcccgt 240
atctagcggg agaggggagg gagcgttgga ggaaccgat gaatacgagt ttcacatga 300
tgatgctcat cgtgatgacc gcagctctct tctatgtgat ggtagtttag atgatcgata 360
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<210> 540

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-C12

<400> 540

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 catcggcatc tcttccaagg ccatgtccat catgaactcc ttcacaaagc acatcttcga 360
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 ccgcgagatc agacctccgt ccgcct 446

<210> 541
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 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-C2
 <400> 541

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 cgagcgggaa taggctcatc aggctcaaca ggactgccag gacgcgcacg aagatgagcc 180
 ctaaggcatc ttgcctcaga gatgcggcga acctcctcgg tagcaatgtg agtagcagtg 240
 tagcggcagg tgtcaaagat ggctttatgg gacttcccaa taaagcgagc aaggcgggtca 300
 aatggcttga cgaaagggtt ggtgtggcaa gaagagctct caccacacga cggagcagga 360
 gccttgcccc tagaagtgtc atcacgcgga gtccacatgg attgaatgtt gttcttggtg 420
 atggggcaag tgaagataga atcaatgac 449

<210> 542
 <211> 387
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-C3
 <400> 542

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tgatcttaga gtcattgctag cgggtacttg tggattgtag aagtacttgt gttgaagttc 180
gtcattccccg tctcatgcac gtccggtgca gcgtcacggtt acgaagtcgg tacaatagtt 240
aattattgat tgtcctgctc atcagagccc tgtatctact atttgaggac gaatctttgc 300
gtgacacacc ccaaaaacca tacacgtaaa aaaaagcggc cgctctaaag gatccaagct 360
tacttacgcg tgcattgcaac gtcaaaa 387

<210> 543
<211> 450
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-013-Q1-E1-C4

<400> 543
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agtggctccg agcacagcgc caccgttgac gccgaccaac agtccccctt cacctgcgga 120
catccggagg cggaacgcc gtccttttac gacggcggtc cttaccgcgc gctgttctgg 180
tcgctgccccg agcttgacga ccaaggccca aaaaacgtct tgccgttacc atggctcgcg 240
ttggagatgt ggggcaggct gacggcgggc gcgctggatg ggacttgggc cgtaaaccac 300
ccgattatac acgaacatgc gttacctgag tccgtgacgc tctccaccga cgtgggtgatg 360
ttctaccggc cggacncgga ggctggggga acgaatgtga tgattgctgc aaccgaggat 420
gtggagcatg tgtatagcat ggaggaacat 450

<210> 544
<211> 414
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-013-Q1-E1-C5

<400> 544
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gaaggggggtc cgtggcggtg atcgggtcag ggccggagtt cctgatcagc ctggcggacc 120
acgaggagtg gagagacgcc tacacggtgt tcgggtccgt ggtgccggag gacatggcca 180

tcgccgagga gatggcgatg ctccccacca gcacagacgt ctggagcggt gtgaccgtca 240
ggctgctgaa ggacccggtg tatatcaagg tgaagaggag aagcaacgtg accgcctact 300
gagctcgccg gcgattttgt tgttcctctt cttctttcac ttgagatgtc aaaagataag 360
aacacaaatt acatgtccaa aggaagaaag aaagaaaaat agaggagggtt tggc 414

<210> 545
<211> 450
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-013-Q1-E1-C6

<400> 545

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ctagaagctt ccagaaagct ccggccccgc gccatggccg cgcccttctt ctccaccccc 120
ttccagccct acgtctacca gagccaacag ggatctgtga cggcgtttca gatatccggt 180
ggggatgtgc aggtcctgca ggtgatgggtg aagtcgcagg acaagttgac tgcgaaacca 240
ggtacaatgt gttacatgtc cggaacatt cagatggaca acaattactt gcctgaaaac 300
gatggaggcg tgtggcagtg gatatttggg aaaagcataa ccagcactgt tttcttcaat 360
cctggccctg atgatggata tgtggggatt tctgcgcat ttctgngag gatactgcct 420
atagatctag cgaacttttg tggagaacta 450

<210> 546
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-C7

<400> 546

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aaagatgggtg atattagagt catgctagtg ggtagttgtg gattgtagaa atacttgtgt 180
tgaagttcgt gattcccgtg gcatgcacgt acggtgaacc gttatgtgat gaggtcggag 240
catgatttat ttattgattg tcttccttat gagtggcggt cggggacgag cgatgggtctt 300

ttcctaccaa tctatcccc tagtagcatg cgcgtagtac tttgtttcga taactaatag 360
 atttttgcaa taagtatgtg agttctttta gactaatgtt gagtccatgg attatacgca 420
 ctct 424

<210> 547
 <211> 460
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-C8
 <400> 547

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 ccagaggaag cgccactgga agccgtcgga cgagatgcag ttcgtgatga tggacgcgta 120
 ccacccacct aacgccgcct tctacatgga cggccacttc gtcaacgaca gcgggctcta 180
 caggttcggc tagctcggcc aggctcgtc tcttaccgtt accggtgacc ttggtcggcg 240
 ccaatggcgg cgaccgagtg ctttatgctg aagcacttgg ggaccgacga ccgaagctag 300
 ttaagttagc gtttgtgtgc cgcattgcgag ctggaatgat gccgcatgct tattttgttt 360
 atcatcacta cttataccta cgtacctatc atttatgcat ggactcgatc gcctttgtgt 420
 gggttttagc cgattgacgc caacatatgg acaaccgccg 460

<210> 548
 <211> 431
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-C9
 <400> 548

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 cagcttaagc gtgaggcccg gatgaagggg gggttttatg tcagtcctga ggccaagctg 180
 ctgtttgttg tcagaatcag aggtatcaat gccatgcacc caaagaccaa gaagatcttg 240
 cagctgttgc gtttgaggca gatattcaat ggagtgttcc tgaaggttaa caaggccacc 300
 atcaacatgc tccgcagggt cgagccatat gttgcatatg ggtaccgaa cctgaagagt 360

gtgagggagtg tgatctacaa gagagggttat ggcaagctca acaagcaaag gattcctctg 420
 accaacaaca a 431

<210> 549
 <211> 354
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-D1
 <400> 549

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 tcaatggtta aatttcctag gtcgtgcgaa tgtttcggat gataccggag tgagtcaagt 180
 ataccgacta gcaagattgc tacagacggt tcggtctttg atatattcag gtttctaagt 240
 gttgtctgct taatttgaca aatctatggg tagtatcggg gggatatgaac catgcaggag 300
 ttgaaataca atagagatca cacatattaa aaggaagaat gagttcacao cagt 354

<210> 550
 <211> 465
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-D10
 <400> 550

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 aagaaagcgg caacgtcatg gaaggaaatc taaggccaca tctcaaattt ctgctgaaga 180
 tcacacagca gtagctgctc tgaaggatgc cacttcaact caggaaaaga ttggaacacc 240
 aaggagtctg gcacaagaag acaaattctca actggagaat ggcgagatgt gcacaaatgg 300
 tgttaccgac tccaaatctg aaaggaagtc cggatcctg cctgttctaa ctggcaaccg 360
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 aagtcccaga agcccattca aaaggtcaaa cgttaacctt gaaaa 465

<210> 551
 <211> 452
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-D11

<400> 551

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 aggcaaagct tgtgatcctt gctaacaact gccctccact ccgcaagtct gagattgagt 180
 actatgctat gttggcgaag atcactgtcc accactacca tggaaacaat gttgatttgg 240
 ggactgcgtg tggtaaatac ttccgagtct gctgcctgag tatcatcgac cctggcgatt 300
 ccgacatcat caacgcaaca ccagctggcc agtaaacctg tgcattgccat tttcagtgtc 360
 tcgtctgatg ccattttctt gctggacttg atttggtctt gtgtacatca tttatcagtc 420
 aatcaagttt gatgggacta tggtttttca ct 452

<210> 552
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-D12

<400> 552

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 ccggatgag ggggtgggttc tatgtcagtc ctgaggcaaa gctgctgttt gtcgtccgta 180
 tccgtggtat caatgctatg cacccaaaga ccaagaagat cttgcagctt ttgcgtttga 240
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 gggttgagcc atatgttgct tacgggtacc ctaacctcaa gactgtcagg gagctgatct 360
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<210> 553
 <211> 458
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-D2

<400> 553

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acaccgcctc gggggctgca acctctacgg agatagagcc gaacactgac cttgtccctc 180
atgaagcttg tgacttcgag gtaccggact ccgaatctcc cagccccct ccaatcgaat 240
ccgattgggt gccggtcatt gagttcaccg cagcggacat ctttcaacac tcaccttttg 300
gcgacatctt gagttcgcta aagtatctct cgttatcagg agaaccctgg ccggactgcg 360
ctcaggacgg ttgggatgcg gatgacgaag aaattcaaag accaaccacc aatccattcc 420
ccaccagcac cttccggcga accaccgcaa ctcccccg 458

<210> 554

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-D4

<400> 554

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aacaagaggt ctttcaagta cgcctgggtg cttgacaagc tcaaggctga gcgtgagaga 180
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gattgtgctg tgcttatcat tgactccacc actggtggtt ttgaggctgg tatctccaag 360
gatggccaga cccgtgagca cgctctcctt gctttcactc ttggtgtgaa gcagatgatc 420
tgctgctgca acagaatgga tgccac 446

<210> 555

<211> 425

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-D5

<400> 555

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cttgggatac gccattgtt tacaagagct ggtgcgtgtg tttgtgtggg tgaaagctac 180
ttgagtcgag tttaatgact tgaatgttga ttaagctgga gttgatccaa actctgttta 240
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agttgttagg acatgtcatt gcactcaaaa ctagctttat gcaaaattat ctacttagtg 360
ctatatcatg cattgttgta ccttgtttca aaacatgggt tgcttgtgag tacattaaaa 420
ttact 425

<210> 556

<211> 440

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-D6

<400> 556

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gtcagcgcgc agcagcctct cccgcgagat aaaccatggg tggggacttt ggtttgatac 180
agattgatca atcaacagta gccatcaagg agaccttcgg gaagtttgat gccatcctgc 240
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tgcgtgtgca acagcttgat gtccgatgcg aaacaaaaac aaaggataat gtctttgtca 360
acgttgtggc atctgtgcag taccgtactc ttgctgacaa ggcattctgat gccttttaca 420
ggcttagcaa caccaaggag 440

<210> 557

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-D7

<400> 557

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 gtgcacgctt tgaaaatctg gagacattat ctgattggaa agaagtgcc aatattcacc 180
 gagcataaaa gtctcaagta tatattcact cagcccgact tgaacctttg acagcgaaga 240
 tggctcgagt tggttaagga ctacgacctc ggaataaatt atcacctagg caaagctaatt 300
 gtggtggctg acgcccctcag ccgcaaacca gccaacctta atgctctaatt ggattcctta 360
 cctccggagc tttatgaaga aatcatgcag ctaaacttgg tgatcaccga cgcccgtctt 420
 aacaatat 428

<210> 558
 <211> 463
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-D8
 <400> 558

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 aggtgagtcg ggaggtgaca tcgaacatga tgattgcaca ctggccatgg atgtagtacc 360
 cgtcacggag gccaccgaac ttctcctgtc cgcccggtgc ccagcagtag aacctgatct 420
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<210> 559
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-D9
 <400> 559

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aattgctttc ccacttccac acatatgtcc taaacctaaa gtcaaactcg gccccactaa 120
 ttctttctat ctggcgccac cgagtttggga tgtcttagcc actgccacaa accctaggca 180
 aatcagtctc accgataggg atctcgggtct caccgagatg ggattgtaat ctctctgtgt 240
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 tgcaaactct ctggttaact tattatcaaa atcgggtcca ccgagtttga taatcgggtcc 360
 aaccgagttt gcctgaccga cactctgggt agctaattac caaaatcgggt cctaccgagt 420
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<210> 560
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-E1
 <400> 560

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 tggcagtcag aaaatagaga tgaacacatg cattaaatat cattcttacc taaaggaagg 180
 ttatggcgcc aatatggatg atgaggattg gaacacagat ctccctttgt gcagttccac 240
 caaaatgaac caactgttcc attctgacat tccagttaaa caacacaaaa gtcacttctt 300
 ttaagaagag ttttgtgcag tgcacaaaaa ggtcacaaca gcaggtgaat tggatatccc 360
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<210> 561
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-E11
 <400> 561

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taatgccgca tacaaccctg cagtccgccc aacgacgata ttcccgccttc attgagcggg 180
 tcttttaggtg catcggatat ggattctttt ccgaccgtct ccaccccccg tgacacggac 240
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 caggacaacc tcccggactt tgcaccggac tcggttcggg atcccattgt ggctctggag 360
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<210> 562
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-E12
 <400> 562

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 cagcaacaac ctttcagtgg caatgggttt tgatattgcc ttccacgata atcccctgga 180
 ttagtagtga tttgagccag cggatgtgct ggtagcaaca catcattccg ccttgggttt 240
 gtcagttcgg tacccaatag atatatgttt tttctctagc cattgctatt ctttttagtg 300
 tggtgcgccc aacgaaagca ttggcgtggg gccaaatfff tgccatgtgc cctcttgtag 360
 agtatatcac tgcccaatca tttctactta aatatgaaacc ggtgatgggt atagatffff 420
 ttttgtaaaa aacc 435

<210> 563
 <211> 348
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-E5
 <400> 563

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gacacatcat ggtctatcat gacgactaca tactgagggga acatgatcga acagaccaaaa 240
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<210> 564
 <211> 445
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-E6
 <400> 564

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<210> 565
 <211> 91
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-E7
 <400> 565

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<210> 566
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-E9

<400> 566

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atctggtaat cgcgatggct atacgaagag tagtgatgaa ggcaagatga tgcgggcttt 120
gtctctgggc aattcagaaa tggcatacac accgccaaaa cctgaccgca ctcatccctt 180
tgccatatca taccatgatg ctgatcctta ctatgggtggc gcagtggcag cctatggcgc 240
acatgctatt atgcaccccc agatgggtggg catggtacca tcctctcgag tgccgctacc 300
gattgaacca gctgccgccc aagagcccat ttatgtgaat gcgaagcaat accatgccat 360
tctccgaagg agacagctcc gcgcaaaatt agaggctgaa aataagctgg tcaaaagccg 420
ta 422

<210> 567

<211> 447

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-F12

<400> 567

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aaccgacgag cgtccaaagt ccaaactctgg gggaaggacg ataacacaca aactgcaact 120
ggcctctttc gagaagggtgc ctagccaaca gagaaccaga gcaccacacc tocaatcatc 180
ggctcctcgc cgatcatgca ggccgaaaga gtcgattgaa aactgacaa caagccccat 240
caaaaggacg ttctgtcgt cgccacctgg ggccgccacc tcgactttcg agcccccccc 300
ccccacatg agtttccttg gccgaatcca catgtgaagc caccatgagt gtcgctgtct 360
ctaggacggt cagatttgag tcaacaaact ttcccacccc cggagctggg tgtgccatcc 420
acttcctaac aaaccgcaat gggaaaa 447

<210> 568

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-F6

<400> 568

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tattgtcctc acagaaccag gcctcagcgt gatcatcagt gctgtgctta ccagtcgtgc 180
aattttccag cgtatgaaga actacactat ctatgctgctc tccatcaciaa ttcgtattgt 240
gcttggaattt atgctacttg cctcatctg gaagtgcgac tttccaccgt tcatggctct 300
gatcatagcg aatccaaatg atgggacat catgactata tcaaacgacg gggtaaaacc 360
atctccacta cccgacagct gggagctggg ctgagatttt c 401

<210> 569
<211> 380
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-013-Q1-E1-F7
<400> 569

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atccatgtaa gaatatgggt cataattagg atggttcttc aatgtattca aagggatgca 120
ttggagattt tcgatgttgc tagaaagaca ttttcacgag aaatgtcacc gatataattat 180
ggaatagtct aggaagaacg gaagtgtgct aacttagggg ggattcatga cgagtgggtca 240
cagtctttga gtatctgcc aacaagccac tgaatcatgt atgaggaaga gaaaacatgt 300
gtgattatag aaagacgagt cagcgatgaa gcatattaca gcacgcgtca tatcaagtag 360
aacgtgcaga atcacctcac 380

<210> 570
<211> 455
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-013-Q1-E1-F8
<400> 570

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agcatcttct ccatgacttg actgagatgg gtatctggac acctgctctg aaaaataaga 120
taatttatga agatggttct attcagaaga tggaagaaat cctgatgat cttaaagcaa 180

tttacaagac tgtttgggaa attaagcaga aaactctggt tgacatggct gttgatcgtg 240
gatgctacat cgaccagagc cagagcctta atgtccacat ggatcaacca aactttgcaa 300
agctaacttc gttgcatttc catgcttggc ccaagggcct gaaaactggg atgtactatt 360
tgagaacaag ggagctgct gatgcaatca agtttactgt ggacactggc tttctgaagg 420
tcaatgggga tgctaattggg actaatggca ctaat 455

<210> 571
<211> 438
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-013-Q1-E1-G1
<400> 571

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gtgcgacatg cctcacctgg atgatgattg gtgcttcagc attaagcacg aggagacctt 120
cgaagttgaa acggtacaca acaacgacaa gtgttatttt cataattaag catgacttaa 180
actctttcaa cgtgtaattt tcatctttta caattcgagt atagcttatc ccatgccatg 240
caagatgcta tgtcttggag aggatggatt ttgaagacca tgaaatttct gaaacaaaga 300
aaattcacct aaggactcat catgatgtgg actttgaagt aaatctatat aattctgaga 360
gcacaacca tttggttgca aaaattggga agcattttgc aagatgtatg gttttgatga 420
gggtatgctt atcaccat 438

<210> 572
<211> 407
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-013-Q1-E1-G2
<400> 572

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tttagttttc cacaatcatc ctgctgtac acaccttttg ggagaagccc acttgattag 120
aatttattag aattctctat gtgcttcact tatactttt gagctagata gtttttgctc 180
tatgcttcac ttatatcttt cagagcacgg cgggtggctta atttttaga aattgctagt 240

ctctcatgct tcacttatat ttttttgaga gtcttaaaca gcatggtaat ttgaatgaaa 300
actatcatag gaggtgaatt ggatgccatg atcaatttga tacttgataa ttgttttgag 360
atatggaggt agtgatatta aagtcatgct agttgggtga ttatgaa 407

<210> 573
<211> 460
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-G5

<400> 573

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tacacgaatt gcttaggaat tcctaatttg atatgaattt tggagttcca aaagtatacg 120
ttcaatacag attactacag actgttctgt ttttgacaga ttctgttttc tatgtgttgt 180
ttgcttattt tgatgaatct atgagtagta tcggagggtga tgcacatag ataagttgga 240
atatagtaga tattacaccc atatgagctt agaatgagtt tattatagta cctaagtggt 300
ggttttactt tattatacta acggagccta cgagttttct gttgagtttt gtgttggtgga 360
gttttcaagt tttgggtgaa ttcttttgat ggattatgga acaaggagtg gcaagagcct 420
aatcttgagg atgcccattg caccaccaag ataatccaag 460

<210> 574
<211> 452
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-G7

<400> 574

gtaccggtct agaattcccg ggtcgacgat tgaagcaacc atgtattcca ttcatttttt 60
tcacgatatt ttactttctc aagatccaat ccatacctag ttcaatcttg ttactggcca 120
tatctcttta catgttctat aatacaatat ccgcataacc aaacacattt atcacatggt 180
tgcaagctac ttaggatggt gtattaccga gagggcccag agatatctct tcgtcacatg 240
aagtgaaaaa tccaatctt tatccatgca acccaactaa taccttctga gatgcttgaa 300
gagtaccatt atgatcacac agttatgaaa ttttggttga taccacaaa gcattcttcc 360

ggttttagag agtgtcatga tctcatagtc taaggaatat atacttgaca ttaagaatat 420
gtagcacata aactaagtga tacgatcata tg 452

<210> 575
<211> 281
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-G8

<400> 575

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accagtgtag catccttctt tgtcagcca gttgacagtc tgatcgacag aatgcttgac 120
aagattggta caccggaagc tcttgccctg aggggaaagg ctgccgtagc acaatcaaag 180
atagcaaata agctttacct gaaaaaattc tctggcccca cgtcgcatgc tttggtgatg 240
aaagtaccaa tcagcataag ttgttgtggg catccaccat c 281

<210> 576
<211> 447
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-H1

<400> 576

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tttatcagct ttcttggagc ccaacagga tgtctcacta tcttgaacct tatctacatt 120
acttccttta ccattggata acagggtact cttctccaat attttattcg cattctaaaa 180
gagaaacaaa caaatgcata tcagggttac aatgtagtat atgaaactca ttttggtaaa 240
ccagttaagt agtaagggtg acaggataac agcatgaaac aaacatatat ctatgtagta 300
tggtcactgt atggtctata tcattctagt ttatgttgcc aaatcaagat agatacagtt 360
caaatcatat ctatttaaga caaagcagca tagacataat ataagtgtgg gaaactaaac 420
agcaataaca acacttgtaa tgtgcat 447

<210> 577
<211> 159

<212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-H11

<400> 577

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 aaaaaaaaaa aaaagcggac gtcacatagag gatcaaaagc ttacgtacgc atgcatgtga 120
 agtacatggc tcttctaaag tgtcacctaa gattcaatt 159

<210> 578
 <211> 457
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-H3

<400> 578

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 agtcggagca tgatttattg attgattgtc ctccttatga gtggcgggtcg gggacaaacg 180
 gtggctctttt cctaccaatt tatcccccta ggagcatgcg cgtaataactt tgtttcgata 240
 actaatagat ttttgcaaca agtatatgag ttctttatga ctaatgttga gtccgtggat 300
 tatacgcaact ctcaccttc caccattgct agcctctctt ataccgcaca cctttcgccg 360
 gtatcagaca cccacatat accttctca aaacagccac catacctacc tagtatggca 420
 tttccatagc cattctgaga tatattgcca tgcaact 457

<210> 579
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-H7

<400> 579

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 aatcaacggg gccccggtgt ttgaaattca ttcccatttc ttgcatggga cctaagcatg 180

caccaagga cacagatttg attttcaacc aatttatatg cactgaagca tgtgcatgta 240
gttcaagttt gaattatgca cataaaatgc attgaaaact cagttaatgc ataaaaatgt 300
ccaaacgaac cccgaaaaat cacaaagatt cacacaacac tcccgttggt ctatgttgac 360
tcgagaaaaa aaattgaaaa caatgagagg caatggatat aatttcgtcc ccaaagctgg 420
gatgttcctt accgaaaacc atcatg 446

<210> 580
<211> 404
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-A1

<400> 580

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ccagccggcg tcgtgtccct cctttccttg gtcattggtcg gaggtacgc ccatgggatt 120
atgcgtagct cgcattcgtg acgcagtcag tgcggttacc atatgcacct ccggacttag 180
acttgcgagt tctttttctt ttttgtgtgt ttcgaagcag ttgtctgcat atcttctgtg 240
ttttcggacc tttggtgact gactgactgt cgtgttacat tgtcgttgaa ctccaagtgt 300
atgttctagt gaactaagtg aagtatgtat gggcggatgg tggaaatcaa aaaaaaaga 360
agaaaggaga aaaaaaaagc gggcgctcta gaggatccaa gctt 404

<210> 581
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-A10

<400> 581

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tggtatcagt tttcaggttg ctcggtgaga atttccagtt ttttctagat tagatttatt 120
ttcttaccta ttgtccaaga aaaagccaca aaacaaaagt tagatctatt catactttgt 180
cctagccaga ctgggccttt gcaatttttc ttttcattgt ttgtattatt gaattatcgg 240
ttgcatcgcc gtgtcgagtt gctggtctta gtgtctagtt cctttagagt ttcgagttct 300

gttcacatta gtcacgccgc tgctgcatca ttatcccatc cgctgtccac catcccatcc 360
 accaattttc accacgtgct acgcgctggt c 391

<210> 582
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-A12
 <400> 582

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 ccacctccgt ggctcccgcg actacaagac cgccatggcc gtcgagatag attggccggc 180
 cttcttcgtc tgtcggcttc ttgggtgaaa ggcacatggt taatttggag cgaacatttc 240
 tatctcatcg gcgtaaactg gccgacctgt gtattaagtc gtgttaatta tgttcaagat 300
 cgcaactacc tttgtgcgac cggaacaaaa acctcaacat ctatttctgt actccctccc 360
 ggaacgtttt ttttgtttta aaagaagacc cgttgccaaa aaaaaacaaa agtttaagaa 420
 ataaaa 426

<210> 583
 <211> 330
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-A5
 <400> 583

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 ttccgatcgt tctggccgca catattatgg acatccagtt ttggccactg tgggagagac 120
 tacgacagac agcgatgttc acagtgatga tgtcagtcta agggccgact atacgattcc 180
 tccgacatgc gtagccgatc gacttcatgg tatccccgcg gatgctactc ttgtggcgaa 240
 cctttcttgc gctctatgct cgaacgactt ggaatgggta ctcgctatta tatcgcat 300
 gctcgatcag ttacctcctt atgctatcag 330

<210> 584
 <211> 391
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-A6

<400> 584

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 aataatatgc caattttctt gggttatgaa tttagtcctc atgtgataag gtattcaaga 180
 gggatataat aaaaaattca tgaagtattg aatatatgag aagtttgatt ccttacattt 240
 gttttgagat ataaagatgg tgatattaga gtcatgccag tgagtaattg tggtttagta 300
 agaatatttg tgttaagggt tatgattccc gaagcatgca cgtatgggtc ctcgttatgc 360
 gatgaagttg gagcatgatt taattttgaa t 391

<210> 585
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-A7

<400> 585

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 attgacccca tgaagctgct gccctctca cgcttcctgc cgcagccaaa gggcttgact 180
 ccaagaggtg gtggtcgagg tggaagaggt ggtggtcgtg gtggatttgg tggccgtgggt 240
 ggattccgtg gaagaggtgc accaaggggt cgtggacctc ccaggggtgg agggcgtgggt 300
 ttcagaggac gaggcagatt ctaggatgta gttttaagtt tgctgtttgt tgaaacatga 360
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 tgtggaaatt gaattccttg cg 442

<210> 586
 <211> 420
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-A8

<400> 586

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agtgtcagac gtcgggttta atccctgttt gcattggggg accactgccc tattaatcat 180
ccaatcagat gttggttgtc atgattaagg cgaaactacc gattgaagta accttcctta 240
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ttcttctatt cctcggcatg cgcttcctta ccccatcgtg ctgcactgat ggatgttttg 360
gcagacatct caattttctc ttttggtgca acgcacagcc atatgtgcc a tctatcccta 420

<210> 587

<211> 395

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-A9

<400> 587

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gttagtttca gagagagatt gtgtgggtgt gaagtgtact gaagattgag gttcatcctc 180
tgactaactt agtcacagat gctaaccctaa cagtaaatga ccaacgaacc ttcgaaatgag 240
taggataagg aagattagtc ggaggattca ataacggaat tagagaaaac agagcagcag 300
ctcaataata acacctaagc tttagaatca aactgcatg ttggaaaacg gaggataaga 360
cagtacacga agttatcgaa actctgaacc acatg 395

<210> 588

<211> 389

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-B10

<400> 588

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ggggaacgct ccggaactgc gagatatatt ggaggataag gcaagacaat caagatcgat 120
 ctacggatca cgtggacgcc ccatgatacg cgacgacagc cgtcgcgccg gacacagtaa 180
 gtctgggagg gccgaacaaa acagacaaaag ctcttttgag ctccgtcgtg atatcgccca 240
 gtacagaggc gccgcacgcc cactatgctt cacagatgaa gtaatggatc atcaaatccc 300
 cgaagggttt aaacctgtca atattgaatc ttatgatggc acaacagacc ccgcggtttg 360
 gatcgaagat tatctctccc agatccaca 389

<210> 589
 <211> 264
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-B12

<400> 589
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 aatgaaataa acgaaataac gctcttggtc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aacaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aaaggggccc cccaaaagga tcaaagctaa ggtacgcgtg aatgcaagggt caaacccctt 240
 caaaagggtc accaaaatta aatt 264

<210> 590
 <211> 311
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-B2

<400> 590
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 ggatgcccat gctaacagga gtgcgagggt tgactggctc cgctgcaatg tgaggctgtc 120
 atcgactcag gatcacaagg gttgtgcgtg cttagaggga ttgtctgcct aaaagttgga 180
 ctagggtcag gccatcaaac aagaactaat tccatgacgt caaatcgggc gatctatagg 240
 atcaaacctt acgtacccgt gcatgccacg taaaatctct tctacactgt cagcgaacat 300
 cagttcaatg a 311

<210> 591
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-B5

<400> 591

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 caaaaatgag gagcatattg ctccctgag gcctaaaaga tcaaagagac tagtgaggag 120
 cacgggagag gataaggaac ccgttgctgc ttgtgatgtt gagaaacctg cagatgcagc 180
 tgaaaacaat gacaacaatg atgcagaaga gttgcaagac cagactcctt ctgcctagtt 240
 gacctactgg gctgacctga tgagaacata agatgcgaat ggcaagactc taattttgtgg 300
 tgtctagtac gagcatcaaa gatggcagcc agaggaggag ctctggatct gcgtaagggtg 360
 ttacgcggtt taataagtag tttaactctg cggtggagct tcctttcaga accctggga 419

<210> 592
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-B6

<400> 592

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 tgtggcaaag ttagggttct ccaaagaca ccaaaggac gagatataga tgataaggac 120
 gaattcgtat ttaatgaaga ttttagtgct cccctttatc gcataaaggt gaatgcaatt 180
 cagatgaagg aaacagtaga agaaaacaca agcaccactg agagagtatt tcaagatcgt 240
 cagtatcagg ttgatgcagc catagttcga attatgaaga cgaggaaaac tctcagccac 300
 acccttctaa taactgagct tttccagcag ctcaagttcc cgattaagcc agcggatatg 360
 aagaagagaa tagagagcct aatcgacagg gagtacctgg agag 404

<210> 593
 <211> 75
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-B9

<400> 593

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cacctagatt cagtt 75

<210> 594

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-C1

<400> 594

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aaagtgtctc ttttaattgat tgtatttcct tgttgcaatc cgtgctaaat tctccacatg 120

cttatagtca acataaagcc ttcaccgaac atattgttga tgccttgatg caatcttatg 180

aagaaaaact tgagttgaaa gtttctatcc ctagaaaaact ctatgatgag tgggaaccaa 240

ctattaaaat taaaattaaa gatcatgagt tttatgcttt gtgtgatttg ggtgctagtg 300

tctctactat tccaagact ttgtgtgatt tgctagattt tggtaatttt gatgattgct 360

ctctaaactt gcatcttgcg gattctacta gtaagaaacc tatgggaagg agtaatg 417

<210> 595

<211> 396

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-C12

<400> 595

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ttcgtcgtct ggctcgcagg ggccggcgtga agcgcacctc ggggctcatc tacgaagaga 180

cccgcggcgt gctcaagatc ttccctcgaga acgtcatccg tgacgccgtc acctacaccg 240

agcacgcccg ccgcaagacc gtcacggcca tggacgtcgt ctacgccctc aagcgccagg 300

gacgcgcctt ctacggattc ggaggctagg cgaattcagc tcgcaccact tgatcagata 360

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396

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 agttgtgctg cctagccttg tttcctatcc tactatcata gacctttgtc aagttattac 180
 cccgccctct tgaatttgca ccttatctct gaggctgaat ggtgttaacg ttttggagtg 240
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<210> 597
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 <212> DNA
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 gtatcaactc cccaagctt aaacctttgc tttccttcaa gcaatttagt tgataaactg 180
 aaagtgataa agaaaaattt tacaaactct gtttgctctt gttgttgtaa atatgtaaag 240
 ccaacattca ggttttcagc aaagattatg aactaacat attcacaata acatttaggt 300
 ctcatgttta ctcatatcaa tggcataatc agcaagcgag caataataac aaatctcgga 360
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<210> 598
 <211> 375
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-C7

<400> 598

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acaagtccat gtgctacagc ctccatgtcc atgtcctccc tttcttcagg ttctacaggg 180
gagcccaggg cagggtcagc agcttcagct gcacaaatgc aaccatcaag aagttcaagg 240
acgccctcgc aaagcactcg ccggacaggt gcagcctcgg cccggcgcg gggctcgagg 300
aggcggagct cttggctctg gcggcaaaca gggacctgga attcacctac aacgagaagc 360
cgacgctggt gccga 375

<210> 599

<211> 360

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-C8

<400> 599

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acttggtacg tcttgacttg gcatagatct cctcggcaac gacgccagaa attcttcccc 180
ctacttcttg agcttgcgtt gggttttccc ttgaagagga aaggggtgatg caacaaagta 240
aagataagat tttccatcag tttgagaacc aaggtatcaa tccagtagga gacaacgc 300
agatcaccga gtacacacgt aagcagacaa acttgcacca aacgcgatag aggggttgct 360

<210> 600

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-D11

<400> 600

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atttgcttta ttgtactaat ggatcttatac gagttttctg ttgaagtttt gtgtggatga 180
 agtgtctaaa cgaggaggtc tcgatatgag gaaaaggaag agaggcaaga gctcaagctt 240
 ggggattccc aaggcacccc aagtaaatat tcaaggagac tcaagcgtct aagcttgggg 300
 atgccccgga aggcaccccc tctttcttca acaagtatcg gtatgttttc gtattcgctt 360
 cgtttatgca ttatgtgcaa gtcttggagc gtcttttgca tttagttttc atttttattt 420
 tatgaaccat gc 432

<210> 601
 <211> 402
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-D12

<400> 601

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 taacgactcc agcgccgcca gctcggcatg tttacctccg cggctagggc gctcctggga 180
 gccctcgctt tcccgtgaga gatctttcga ggtctctgcc aggcgggtgag ccctctcatt 240
 tttttccgca tccttggttg ctgctccctt gttacgagta gttctcgacc tagagctctg 300
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<210> 602
 <211> 375
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-D4

<400> 602

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 cagctcttgt gatctccggc atcacgggga ggattaacag ggccgtgtgg gggcccgga 180
 accggacat catcaccgcc ggtgaggatg ccaccatccg catctgggac tetgagaccg 240

gaaagctgct gaaggagtca gacaaggagg ttggacatca gaaggcaatt agctcactgt 300
 caaaatcctt agattgggtct catttcctca cagggttcctt ggataaatct gctaagctat 360
 gggatgcaag aacac 375

<210> 603
 <211> 312
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-D5
 <400> 603

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 ggggcaacgc acaccgctaa aaacatgatt acattgatta accttgtgtc tccaatgggt 180
 gccccctgcc cccgtttatc aatgaataat agacgggatg ggccggccct ccccaaagcc 240
 ccccctatgg gagtcccact cccaaccgga ataaggatcc ccccttccaa attcaagata 300
 agagtccttc ca 312

<210> 604
 <211> 360
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-D7
 <400> 604

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 aaggggcggc gacagctgct gggatggcct gctcgtggca tagctagagc tcctctccaa 180
 gcgcggtcgg aggcaggaag gccgggctgc tggagtggga agaagggggg atttgcgtag 240
 ttttgctgta aaagtaggtt tattatcaga ataaatagta tctcctcgct catttgtaat 300
 caataggatc aatttatata caccagctgc ttgaggcatc tacaagcaga ggaagggaat 360

<210> 605
 <211> 399

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-D8
 <400> 605
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 cgatgttgct gagtttgtct acacaaataa gccttcagtt gatcagctga taaagtttgt 180
 ctgcaaagat attaccaaag catgtgctgc agatccacca ccagttccaa aagaccgggt 240
 ccctggagaa ccctttgcag caaagccctc aaaggatgct gagatggaga agataatgag 300
 atcaatggag ggcattgccag gagccccaaa catgaagatg tactccagag acgatctgat 360
 gaagaacaac tttggcgttg aaggtgatga ggatgatga 399

<210> 606
 <211> 436
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-E10
 <400> 606
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 tgaagacacg gaaatcactc atattgatga tacagttgat cctgttcgtg atttggaaac 180
 tattagtcaa gaactgaggc tcaaggatat agagtttgtg caggctaaaa ttgatgacct 240
 tgagaagtca atgaagagga gcaatgacaa gcaacttaag atagaccatg aattatgtca 300
 gagggctcatg acacatctcc aagacgggaa agacgtacgt ttaggagaat ggaaagctgc 360
 tgaaattgag atcttgaatg cctttcagct gcttactgct aagccagttg ttttaattggt 420
 gaacatgaat gaaaaa 436

<210> 607
 <211> 107
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-E11

<400> 607

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cggcgataat gacgaccgca tatacttttg cagttcgggc attaggt 107

<210> 608

<211> 376

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-E2

<400> 608

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gggttgcacg aagcttttat gagcctgcta agaggctttg aggtacacaa agtaatatat 120
atatatatat ttgacggta cgcacatgc taggtgtgcc ctatacagat agtagccct 180
gagactctgg ttgctgtccá aaggcagcaa acagagaatc atagtaccag gtgatgatca 240
tgctactttc atgtgcaggc ggctgatggg cgggtggctg gccggactgg tgagtttgct 300
gaactgaggc ggcaacttga tgcggcagat gccgacatcg ttcttgtaaa caagcagctt 360
gatgaggcac agggta 376

<210> 609

<211> 438

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-E6

<400> 609

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aagttttggt tgatggatgg ttccatacag gggacattgg cgagtggcaa cctgatggaa 180
gtatgaagat cattgatcgg aagaagaata tcttcaagct ttcacaagga gaatatgtag 240
cagttgaaaa tttggagaac atttacgggtg ttgtttctgc tatagactcg atatgggtat 300
atggaaatag tttcgagtca ttccttggtg ccgtagtcaa tcctaacaag gaagcccttg 360
agagctgggc tgaaggaaat ggaaccagtg gtgattttga ggcactgtgt gagaatccaa 420

aagcaaaaga atatattt

438

<210> 610
<211> 408
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-E7

<400> 610

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cggaagaaaa tggatgatggg gctgaggatg aggagattga ggatgatgat gctgaggatg 180
gtgaggattc tgtcaagccg caatcctcat cgaagaggaa gaggtctggt ggggaggatg 240
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agtcaatttg ttcttgctga tctggatatct tttctgcttg ggccaagaag gaaaataatc 360
ctctgggaga ggattggttg taaatgctgt agctttagga catctgtg 408

<210> 611
<211> 407
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-E9

<400> 611

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actgctccat gtgctacatc ctccatgggt cagtgtgccc ttgcttcaag ttcgacgctg 180
gagggataag caattcttcc tgcgtcagct gacacgggtc tgccatcaac aacttcagcg 240
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ctgcagcatt ctgctatctg tgagtatatg aggatctatt tgtcaccatg gtggatattc 360
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<210> 612
<211> 397

<212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-F10

<400> 612

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ttgtccaaaa ggaatgtaaa cagtaatagc agtaatgaca ataataaagg atcgcggttt  180
gttattattg gccaggatcg tgtggaacca ttgcaagctc ttcaagattc tgggcaagag  240
atttgtgtga acatggacaa gcaaaaggag aagagaagac ttgctgagaa ctggaggcga  300
aagaaacacg aagagaagaa aagcacacgg gaacaaaaga gaaaggacag gagaagtgtc  360
aaagagaggg actgaataat aaatgaaata ctgaaag                               397
  
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<210> 613
 <211> 410
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-F11

<400> 613

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ctgaactatc acagaacgca ctgcttaatg cttctcaact gatcttttat caggccattt  180
gcacacacat ggatcgtgtg catctgtaaa ggatgagacc ttaaaaggca agacacaaat  240
tactgactat agcagagaac acataccctt acttcgtgat aatacaagtt ccaagaagaa  300
aaacatacag gtaactccgg taagctgcaa catggatgaa agtttgatgg tggaacggta  360
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<210> 614
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-F5

<400> 614

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ctcgcgcggg gaataaaaga ttagtgaaga aagcaggggc ttttctgaaa tttttgtaaa 180
tctcgttttt atctactcct ttctgtcaa accctcgccg tcgcagcatc agcaatagta 240
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cgtaaaccct cgctttttag ctaaaaactt aaatgttcaa gcagaataga cggggtaaag 360
tgagtaggaa gcaagcggcc gctctagagg atccaagctt 400

<210> 615
<211> 380
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-014-Q1-E1-F6
<400> 615

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agtacgtcat gcataactca tcgattagcc ggccacatac catgcatgga gtaaacaaaa 180
gagaatgtgc tcaagacaga aacactcacc caaaatggta aggaaataga atatcacttt 240
tgagttcctg ctttgtaaga aactgccaca ggtctgcctc catgtcggcg gggtgatgct 300
ccaacacata tccattaacg atgtgtgggt caatgaaccc aacatcatgg atgttcctta 360
ctctgcattc cttaatcttc 380

<210> 616
<211> 385
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-014-Q1-E1-F8
<400> 616

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accatatact agagcacgag gctctgatac caattgaaag gatcgataca gtcgaataga 180

gggggtgaat atgagactac aaattttaat ctttcttgtc aattttaaga tttagcggat 240
 aaataggatt cactagatat gcaacttggt gaacacaacc tacatgacaa gcaagcttaa 300
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<210> 617
 <211> 431
 <212> DNA
 <213> Triticum aestivum
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 <400> 617

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 gcactaacgg agcttatgag atttcctggt gagttttgtg ttgtgaagtt ttcaagtttt 180
 gggtaaagat ttgatggact aaggaatgag gagtggaata agcctaagct tggggatgac 240
 catggcacc ccaagatattc aagaataaac aaaaaccta gcttggggat gccccggaag 300
 gcatccctc tttcgtcttc gtctatcggg aactttactt ggagctatat ttttatttac 360
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<210> 618
 <211> 456
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-G10
 <400> 618

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 agatccttgt aaatgtgtga acaaactgat gagaggtaaa aaggaacggt gtcttaaaaa 180
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 ataaaaagat tggttttcag taaacaattc aaatgcacac tctgatcttt tcctaaacca 300

tctcgtaatg gcaaaagaat tgcattcaga gaaatcgcat ttacctcagc acagcaccct 360
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<210> 619
<211> 414
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-014-Q1-E1-G12
<400> 619

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<210> 620
<211> 434
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-014-Q1-E1-G5
<400> 620

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cactggagca tgtgcatgta gttcaaattt gaattatgca cataaaatgc ctggaaaacc 180
cagttaatgt atgaaaattt acaaacgaac cctgaataat tccaattttt ttgacgacac 240
acctatagtt gcatgttcac ttcagataaa agttctaaca attcaaacac catcctttgt 300
agcagtgacc ccattacgta attcaaata tcaagacgat aaatcaatta gatcacagcc 360
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434

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<211> 342
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
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taaagtgcac caaggccatt atagagaggc tgatacagag ggaaggccat cttgtagtca 180
tagatgaagg aacagcggca gcagaagggtg ctacggcaag ggcacggag cacagaatcc 240
tggctgttaa cccaaactac gtcattgatt gattaaccag ctgaggtcac acagctaact 300
agatccatca tatgtggttg accaatatag cagacattca aa 342

<210> 622
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-G8

<400> 622

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ggagacgtac aagatctaca tcttcaagggt gctcaagcag gtgcacccgg acatcggcat 180
ctctccaag gccatgtcca tcatgaactc cttcatcaac gacatcttcg agaagctcgc 240
cggggagtcg gccaaactcg cccgctacaa caagaagccc accatcacgt cccgggagat 300
ccagacctcc gtccgctcg tctccccgg cgagctcgcc aagcacgccg tctctgaggg 360
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<210> 623
<211> 406
<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-H11

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acttgcaacg aggacacaaa ctgttgggct cagttgcgag tcgagggtgg acttgcaact 180

gggaaaaaaaa agggcggggc caagctgcga gtaaagggtg gacttgcaac tggacaaaaa 240

aagatcacac cccagttgcg agtcgagggt gaacttacaa ctaataaaaa catgttaggc 300

tcagttgcga gtcgagggtg gacatgcaac taggacacaa aatgttaggc acaattgcga 360

gtcgaggatg ggcttgcaac tgggacaaaa taaaagggcg gggccc 406

<210> 624

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-H5

<400> 624

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acataaatgc agagcacctt taaagatcaa ggactgacta gacattgtaa ttcattgtaa 120

aagagatcca atcatagtca taccacaacat aaattaatag tgatgaatgc aaatgacagc 180

tgtgctctcc agctagtgtt ttttaataag agggatgatga ctcaacataa aagtagatgg 240

ataggccctt cacagaggga agcatggatt tgtagagggt ccagagctcg gttttgaaat 300

agagataaat tgtattttga gcagtatact ttcattgtca acgtaacaac taagagatgg 360

cgatatcttc catgctaaac acattatagg cggttcccaa acagaatggg aaagtttaac 420

accctctcc 429

<210> 625

<211> 381

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-H6

<400> 625

ttccccgggcc gacggggcggg aaaggggtga acgcgacggg cgagtttttc cggcgccgtg 60
acgagtggag gaggcacccc atgggtggga accagctgcg ccacgccact ccggggctag 120
gcatcgccat cgtcgccttt ggtatctacc ttgtcggcga ggccgcctac aaccgcctct 180
accgcccgcg cggcgacaac caccactaga tctccccag aggtgaagta gatggagcaa 240
accaatgttg atcttttccg gtttgatctc ataaggtctg catgaccacc ttgtaattcg 300
cgatcaggat gtgtgctgtt ggtccaacta gtgttcctgg aacgcgtgtc ctttaaactc 360
gatactccct ccgtccgcaa a 381

<210> 626

<211> 374

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-H7

<400> 626

attccccgggc cgacttcttc tcccacggct gcggtggctg ccgcgctctc caccccaaga 60
ttgcgcagtt cgctgagcgg aatccggacg tgctgttcct gcaagtcaac tacgagaagc 120
acaagtccat gtgctacagc ctccatgtcc atgtcctccc tttcttcagg ttctacaggg 180
gagctcaggg cagggtcagc agcttcagct gcaccaatgc aaccatcaag aagttcaagg 240
acgccctcgc aaagcactcg ccggacaggt gcagcctcgg cccggcacgg gggctcgagg 300
aggcggagct cttggctctg gctgcaaaca gggacctgga attcacctac aacgaggagc 360
cgacgctggg gccg 374

<210> 627

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-H9

<400> 627

attcacgggt cgacgggaaa cggaacacta cgtttctttt aggtagtaga gattttacct 60
gagagggagc agtaagagtg attagctagt gttagtggta atgactctga tgatttttat 120

tagctactgt tgctggtgat tagatagcta caacagctag tgttggtggt gattagctag 180
ctagaatgag tttgaagatg atgatgtgct acactatgac tatgatgatt aaataactac 240
tgttgatggt atgactatga tgatgattaa atagcttgtg ctggcggatt agattcaagt 300
ggaggcaaca tgtggtgcac attgaaagta ctactaatcc aaacaagatc aagtttggtt 360
tagtagtata cttttgacat gcaccacata ttgcctccat ttgaacctaa tcc 413

<210> 628
<211> 448
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-A1
<400> 628

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agtctatagc tcaccacgtg gctattcctg tcgaacgccc caataaccgt aagatatgta 120
tccgacagtg ccacttattg cacgtacaca ttagtagaaa aagaactacc atggcatatg 180
ctacaccacg gccgagaaca cgtgccca ttagccatc tgagaatagt gtcgcacttc 240
gaaaatagaa ctgtcaataa attttgagct tgtgtgtcgt cacattccaa attacactac 300
taccacgcta tatttaattg caaacctgtt cacaccaatc acaacataaa cggtttccaa 360
cttaggagca tattagtact cggttataag tactactatg ccaagatgac tgcacattcc 420
tcctcaactc ctcatccaca aaaacaaa 448

<210> 629
<211> 374
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-A11
<400> 629

gogtatgaca atactattcc ctagagttag tcgtagtata tgtcaacagt tcgttttctc 60
caagcccaga cgagctgata attgacttgt ataataattt tgcaatagac gggagcttg 120
tggtaaacta tgctttatcg gcagcgtggg gttaaaagat tggatttgcg ggaagaatcg 180
aatggatcga aaacgccgtt tgaaatttga cggttttact gtgtatagct ggagttgtag 240

ttggtcagtc aaagaggcac tagctctcac atatgttgat gatgaaagta aaggttcttg 300
 cgagactgcc ttttctggca ttgaactgtc caagtgttct ctctctctac agtatgttta 360
 ttggttcttg attc 374

<210> 630
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-A12
 <400> 630

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 gaccgacaag cacgagaacc tgggtgaggc tggcgtcatt gaccagcga aggtgacgag 120
 gtgcgccctg cagaacgcag cgtcgggtggc cggaatggtc ctgaccaccc aggcgatcgt 180
 cgtggagaag ccgagcaaga aggctccgc gcccgccggg atgccccagg gcatgatgta 240
 gaagcgcaat gatatgtagc aacctggggg catgcaattt taggggcgtg tggatgatcgt 300
 tttgccaggg gagagaaccg tggcacctta aggaggaaat catggtgtgt aatggataat 360
 gatggcctgt tctattgtct gtttggcacg cttcgttgcg attgccatgt tgaaaactaa 420
 tttggg 426

<210> 631
 <211> 456
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-A2
 <400> 631

gctgcagtc ggtccagaat tcacgggtcg acgggccatt ccttaagatc cagttcgcaa 60
 gggtcccggt ccgacctccg ccagcccatg aagatcgga acgccttagc gctcgctgat 120
 cgccgtcatc tatatatctc ccccttttgc cagcagtgt tgcgtaggcag tggggcattg 180
 tagatcagct atgtttgttc agcctgtagt agcaacctgt cacgggcctt tgtcagctgg 240
 agattggcta gctagacaga cttgcctggg acccacctgc ctgccctggc acattcgccg 300
 tgttcccgcg tcacattttt cgcgggtgga tatgctagaa atgatatgac attcgccgtg 360

ttccccgcgtc acattttttcg cgggtggata tgctggaaat ggtatgcata aactgaaaaa 420
aaccgtagga agaaagaaaa aaaaagcggc cgctct 456

<210> 632
<211> 387
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-A7
<400> 632

ggtccagaat tccccgggtcg acgggagtc ctaattgtcg ccgcagtcag attccagaaa 60
cctgatgaag caccgacttg tttagttcgc tatttcctct gtagtttgaa ctcaatcgtg 120
gaacaaagtt attcgcatat agtgttggag aaattcatgg acagcaacaa agtcagaaaa 180
aaagagaaca ataaaagaag aataaagaac cagaaaaaag tcacgaacaa cagaaaccgt 240
gtatcaagaa tgaagtaaaa gtggcaccct caaaaggatc aatctgtagt tatcgttgaa 300
ggtaatttta aactttctca aaactgaaac tagaatccag acttaggcct ttaggtataa 360
aacgtggaac atggaaaaac ctagggg 387

<210> 633
<211> 453
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-015-Q1-E1-A8
<400> 633

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ggttggcatg gctactttc ctgaagatat tctaaatatt tctacatttg gataaaagg 120
gtacatgca ccatatacgt caaaggagat ttttccccct cttctttcta tattaggcaa 180
attaatgatg tattgttctt ttgattactc tcatatttcc atgacatcat gtttacccta 240
tctatttaat tatagatttt agtccttcaa tttcaattgt tgtacagttc tttcaatttg 300
agcccatatt tgcagtttac agtatttctt ttaacaatcc ttccattttc tgctgcgcat 360
cncttgctat gcaacaaatt atgtagtgca caattttttc ctttacatag atgaaggctg 420
cacggatgtc atactgcaca caaacatgg att 453

<210> 634
 <211> 443
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-B5

 <400> 634

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agtggcttgc ccggcacctg ggacaggaaa agccgaaatc catggcagcc ctcacgacac   120
tcatgacccg cttttgcgcg ggagaagaca gctggctagc tcgcagcaac aacttatcaa   180
agaaccctgg taattcggat accaaggaca aaagtggcag gacacgtcag aataagcaaa   240
aacgtcgtgt taacagcgac aacaatgaag acacggcagt caatgccgga ttcaaaggct   300
ataaatctgg tcagcgga aaagccattca aaaagaatac tcagggcccg tccagtttgg   360
accgaatact cgatcgcttg tgccagatac atggcacccc cgaaaggcca accaatcaca   420
ctaacaggga ttgttgggtg ttc                                           443
  
```

<210> 635
 <211> 446
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-B6

 <400> 635

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gcaaccgcac gctaacatat ttatgcatgg ctactatttg caatagaggc acacgagaag   120
gctgtgatta tttatggcga tgcaagatta cacaattaca gggcgtggac atactgaggc   180
tcggtaacac tcgagtgact tactctacct cgtttatatc taagcgggcg tgccttgtgg   240
acgtcgaggc ttctccacgg gtttcaccgt cgagggttagc tggatggggg tgaggagctg   300
cagggtcggg gtagcgatga tgaccatcgc ggggggttgtt gaccacaatc ccgttggagc   360
gtgttcccaa aaggcgacaa agcacttctg gggacaccaa agtatatttg ttgatggctg   420
gggtagacct caaggactcg attggt                                           446
  
```


<210> 636
 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-015-Q1-E1-B7

<400> 636

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aaactatcat aggaagtga ttggatgcta tgatcaattt gatacttgat aattgttttg  120
agatatggag gtagtgatat taaagtcag ctagtgggt gattatgaat ttaaagaatg  180
cttgtgttga agttagcaag tcccgtagca tgcagtatg gttaaagttg tgtaacaaat  240
ttgaaacatg aagtgtacct agcttgtgca tccttatgag tggcggtcgg ggacgaacga  300
tgggtctttt ctaccaatct atccccctag gagcatgcgc gtagtgcttg gtttttgatg  360
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atacgc                                           426
  
```

<210> 637
 <211> 432
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-B8

<400> 637

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ggggtcgacgg ggacagagat gacacttatt gggcctggca ttttcagtac gttgtacgca   60
tagtgagagg ctgccatgaa cttggcgagt gccggtcggc caaggattcc attataaggt  120
aatggaaaat cggcaacgtc aaacgtgacc ctctcagtc tgaagttcag ctactgcca  180
aacgttaccg gcaacgtgat ctttcccttt ggcttgcctc ttcccgggtt gattccttga  240
aatgtgccgg tctcttcgag ctgcgcgtca gggatctgga gtttccggag caccgaggag  300
gagatcaggt tcaagccggc cccgccgtca actagcatct tagtgacct gaggttgagg  360
attgttggtg aaaccagcat cggcaagcac ccgaccgag ttatgcgac aggatggctc  420
tcaatgtcga ag                                           432
  
```

<210> 638

<211> 417
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-B9

 <400> 638

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gggtcgacgg gctgtttgat cttgttgttg taacatgaaa ggccaacatt caagtttcag   60
caaatattat gaactaacca tactaacaat aacacaaagg tctcagaatt actcatatca  120
ataacataat cagctagcga gccataataa taaaattcag atgacaacac tttctcaaaa  180
taatcataac atgatataac aaaatggtat ctgctagcc ctttctaaga ccgcaaaaca  240
taaatgcaga gcacctttaa agatcaagga ctgactaaac attgtaattc atggtaaaag  300
agatccagtc aagtcatacc aatataaacc aataataatg aatgcaaag atagtgtgct  360
ctccagcggg tgctttttta taagaagggt tatgactcaa cataaaagta aatagat    417
  
```

<210> 639
 <211> 433
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-C10

 <400> 639

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ggtccagaat tcccgggtcg acgggtgccc catcaaatat tatatgcttg atcaaaggt   60
tgatgttggg caaggaaggc aatgtaatag gttatgtttt cttatattca catagaagtt  120
atattgtcat ggatcctcta acatgtggtg ctaataatct ttagctagcc aaaaatcgta  180
ctgagttgag atactacttg tgtatccaaa acccttgaac ccaatttctt gccctgagag  240
tccacagtat ctacctatgg attgaatgag atcctogaag taatttgcata tcggtgcaaa  300
aagcaatata aatttctcct aaatatatat gatcttttat tataaggaaa aataagcttt  360
gtacaaactt gtgatggtaa agaaataaaa gcgaactttc taacattact ttgttcaatg  420
ctagcccgca aag                                           433
  
```

<210> 640
 <211> 432
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-C3

<400> 640

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agcccttttg attacttttg ctggccacaa ataaaacttg ctgctgaacg tagggaatat 120
gagacgagtt ttogtgattt accttaccat cattatggta atacctagat ctatccttgc 180
ctttatgcct agctaggggc gttaaagcat agcgcttggt gggaggcaac ccaattttat 240
tttagtttct tgcttttttg ttctgttttag gaataaataa tccatctaga ttctgttttag 300
atgtgggtttt atgttttaat tagtgtttgt gccaaagtaga acctttggga agacttgggg 360
aaagtctttg cgatcttgct gtaaaaagca gaaacttttag cgctcactag attagctaca 420
actttttact gg 432

<210> 641

<211> 439

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-C6

<400> 641

gtccagaatt cccgggtcga cccctctgtg gaggctaacc tatatttatg atggcctcgg 60
tcctcttccc ccaaaacgta ggcaggaagg gatccacag tggccaattt gaaaataggc 120
aagtagtaca tcttatcctg acgaaagggt gtcttcgcct gctaagcttc tggtcgtgtc 180
gctgtggtgg gctcgggtgat gacatctatc ctaccgtgct ggcgatcttg gtctcgttgc 240
accgaaatgg aaacctttgc cagatgacat ccgtcctact gtgcctgtcc ttgcctcctt 300
agcaccaaac accaaacagg aaactgcctc ctctgcgccc gctggagccc acctgccatt 360
gttatcacgg cttgcgtcac tgctagattg atggggagag agttgggtgat gagggtagca 420
agattgccgt catgatcct 439

<210> 642

<211> 442

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-C7

<400> 642

tcccgggtcg acggggaaca agacacatgc tgataagcgg gcgccggcga ccaaggaggc 60

cggcggcgag gggaagacga ggggcaggaa gaagggcagc aaggccaaga agggcgtgga 120

gacgtacaag atctacatct tcaaggtgct caagcaggtg cacccgga ca tggcatctc 180

ctccaaggcc atgtccatca tgaactcctt catcaacgac atcttcgaga agctcgccgg 240

ggagtccgcc aagctcgccc gctacaacaa gaagcccacc atcacgtccc gggagatcca 300

gacctccgtc cgctcgctcc tccccggcga gctcgccaag cacgccgtct ctgagggcac 360

caaggccgtc accaagtcca cctcatccta agctagtctg ccgtgtccgt gaactgatgg 420

cggcattcgg tatgtaattt aa 442

<210> 643

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-C9

<400> 643

gtccagaatt cccgggtcga cgggtatcca tctgtactat tttcatgcat gatcaaaca 60

gttaaattga tgttttaagc agaataagga aaagcactta aagaggccat gtttgagttt 120

gaaatttgaa tctttgattc aaatttgctc aaacccttct ggtttttagtt gcattagccc 180

aacacactca tattgccatg tttcatgcat gcatcatatt gttgcacatt gtttggtgat 240

gcttgtgtat cgatgtcctt tgcgacaggt tctgtctccg aggagtaccg tgattaccct 300

aacgaagaat catatccgag catcgaacca tcaggcaagc aaccaaccat ttgatcatat 360

cgatacaatc ccatgttctc gctcctgctc tcttttactg cattaagaca acgcgattca 420

aactgctgtg tgctac 436

<210> 644

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-D1

<400> 644

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 atctttgcac actatagggg ggacgccgtt cgtccaccca tagaagcaat cctctatgat 180
 caagaggaaa ttagacgttt tcaatctttg gactatgtcg ctttcaatga aaaccttaga 240
 aaaaagggtcc ctatcaatgt cttgggtgat tgcacatg agcttaataa tgattttttc 300
 cttagaaata atgagctagg atactctctc gagtataagc tcacaagatt ttgtcaaaag 360
 aatgctttca gtgatgaaat agttgtgcac tatgaagggc caaggaggga acccggtcct 420
 tccgtgattg atcttgggga ttttt 445

<210> 645
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-D2
 <400> 645

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 catcgataca aaccgggact aaaaaaaggc gagggcgggt cttttcccgc gcggtaggca 120
 ggggagtttg gcatagtctg ttcgaggcaa ggaggcagga agggaaagaa gcaaataaag 180
 gttgagcgac ttagttttgg gaaaatctga ttttacggaa tatgtacca ctagggttta 240
 tagggctcat ctaaaaaaca ttcgtttttc cattttataa gtctcagttc tactactagt 300
 agtagtacca tcacatgttg gatttcgagg tgcgttagat caccgatgc aagcatgtca 360
 agagaaaact caccaatgca tgtagaagtt catggaaatt tagtggtcat tcatgcattc 420
 g 421

<210> 646
 <211> 425
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-D5
 <400> 646

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gcggcgaggg gaagacgagg ggcaggaaga agggcagcaa ggccaagaag ggcgtggaga 120
 cgtacaagat ctacatcttc aaggtgctca agcaggtgca cccggacatc ggcattctct 180
 ccaaggccat gtccatcatg aactccttca tcaacgacat cttcgagaag ctgcgccggg 240
 agccccccaa gctcgcccg cacaacaaga agcccacat cacgtcccgg gagatccaga 300
 cctccgtccg cctcgctctc cccggcgagc tcgccaagca cgccgtctct gagggcacca 360
 aggccgtcac caagttcacc tcattcctagg ctagtctgcc gtgtccgtga actgatggcg 420
 gcaat 425

<210> 647

<211> 452

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-D8

<400> 647

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 gagagagagg gcgaataaaa cggcaagggt gaagtggggg agaggaaaac gagaggcaaa 120
 tggcaaataa tgtaatgcga gagataggga ttgtgatggg tacttggtat gttgactttt 180
 tgcatagact ccccgccaat ggccgcagaa atccttcctg ctacgtcttg agcttgcggt 240
 ggttttccac gaagaggaag ggatgatgca gcagagtagc gtaagtattt ccctcagttt 300
 ttgagaataa aggtatcaat ccagtaggag gccacgctca agtccctcgt acctgcacaa 360
 aacgatagct actcacaacc aacgcgatta ggggttttta atcccttcct gggtcacttac 420
 gagagtgaga tctaatagat atactatttt tg 452

<210> 648

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-E1

<400> 648

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 acttaatatc gatgttttaa tttagtgtac attgtaatat ttgaactaag gaccatgcat 120

atgggtaatt tatttcgaat tcgtgccata ctagatttgg aaaagttggc attgactcga 180
 ttgtttgtgtt attgtgtagg tcatatgttt gaatccatcc aaagttttct cactaccatg 240
 gtgttcatca tgtacatatg aatttgtatt gagaaagtag cgtggatact gtgaaatgcg 300
 aaatccacgt tagaattgga gatcactatg tgacacacac tctaattcaa ataactcctc 360
 attaattaat ttatagtatc tcctttccaa tgactaatta tttgcaaggc atacacaggc 420
 atggtaatac ata 433

<210> 649
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-E10

<400> 649
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 cggacatgat gatgaggaag atcaagacga agggcatgat catgaagatg aagatgccgg 120
 agcatacgat gatggaccat cgatgggctg ggtgcaagac cctcatattc aagagctgct 180
 tctcaagcag acggataacg caagagctgc tgctgagag aaagccaagc tggatcaact 240
 ggacatagat gcggttactc cattgtatga aggatgcagg cccgaggata cccgcctgaa 300
 agcaacgctc atggctctgg agatgaaggt aaaacacaaa atgaccgacg catgcttcga 360
 cgagaacatg tcattctggc acgaacgtct tcccaagggg aac 403

<210> 650
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-E2

<400> 650
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 ggaagttgtt aaggaaggct tcttccaagt cctcccatct gccgatagag ttttcaggaa 180
 ggttggttaa ctagtgccga gctggccctt tgagctttag tgggaggtat ttgatagcgt 240

gtaggtcatc tccgcgggac atgtggatat agagaataaa atcctcgatc cataccgcgg 300
 ggtcggttgt tctgtcgtat gattcaatat taatgggttt gaacccttcg gggaattcgt 360
 gatccattac ttcacggtg aagcaaagag ggtgtgcggc acctctatat cgggccgcat 420
 cg 422

<210> 651
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-015-Q1-E1-E3
 <400> 651

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 aataactttg gacaacttca tgccgtcatg ccccggttac tttcggctaa tgatgaagcc 120
 attgatttct tcattacttt gacgctanga aacctctoga cccctccgag atcctcgacc 180
 ctcgaccgct cagcgatcca cgaccctcta ccctagtcc cgacccttga ccccatgtc 240
 acatttgtct agtgtcaaag gattcaacac catgtcttca tcattagacg aaagtacact 300
 agtgaagaac cgggcaatag caccggttg taagggcctt tagtgccggg tcggtaactg 360
 gcactaaatt gtgggcacta aagccccccc cttagtact ggttcacac gaaccggtgc 420
 t 421

<210> 652
 <211> 445
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-E4
 <400> 652

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 gtgaggcccg gatgaagggt gggttttatg tcagtcctga ggccaagctg ctgtttgttg 180
 tcagaatcag aggtatcaat gccatgcacc caagaccaa gaagatcttg cagctgttgc 240
 gtttgaggca gatattcaat ggagtgtcc tgaagggtta caaggccacc atcaacatgc 300

tccgcagggt cgagccatat gttgcatatg ggtacccgaa cctgaagagt gtgagggagt 360
 tgatctacaa gagaggttat ggcaagctca acaagcaaaa gatccctctg accaacaaca 420
 aggtcattga ggagggtcct ggaaa 445

<210> 653
 <211> 292
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-E5
 <400> 653

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 ccccatccag cccttaaaaa aaactttctcc ccttccacc cgagatgagc tgcagcggcg 120
 gcggaacaa cttgtcgtga gcggaggcag cggcacagtc tggtcggcag cggcggctgc 180
 aagttcttct cgggagcggc ggcggcaaga tcttctcacg gtagcagcag catectctcg 240
 cggctacgtc gtctgcagt tcgactcgag cctagcaggg cgtcggtgat gt 292

<210> 654
 <211> 408
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-E8
 <400> 654

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 ttgctcggag ggaacgcttt tgctcgattc aacacagccc cgcactatgc gtactgaaag 180
 ctctagatgt ttgatccacg cggcatcatc acaatcaacg gtcacacgga acgctccctt 240
 tgcatctatg agcacattgc aactcttgca gccgatgtgc agcgcggccc ctcaagtcca 300
 cacatctcat cagccatcaa gctgtcggac tttgtgaaaa gagtccagtc agtctcgcat 360
 cctgatggct ctgtatttcc ggaactagac taacaatttc gcctctgt 408

<210> 655
 <211> 175

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-F6
 <400> 655
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 cggacctgtt cctttgagtt ttggttatta tcttgctgga gttatagatt gtgtagctg 120
 gattatgtgc cgtgctggca tttggatatt gatcttgatc cgttcgtctt gcaaa 175

<210> 656
 <211> 266
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-F7
 <400> 656
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 ggaagtcttg cagaagcggg ggcgctaaat gatccaagcg taagtacgct tgtacggtaa 120
 tcaaagccct ccagtcctgg acacgaaagt caggtcagtc gtgttcgtct tacacctacg 180
 aggatgggaa aatcctgtgg tgacctatct gatgtcgcgg taaccagat ctacccttcg 240
 cgagtaggag ttgaacccat aaagct 266

<210> 657
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-G2
 <400> 657
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 ctttgatttc agactggatc ttcacaagat catcagttgt catagtgaca acgttgact 120
 tcaggaattt ttctttcctg tactgcgctt tctaaatctg cctggccttc tcaaatttcc 180
 atttctcttc ttggatgaag gcagtcacca tatgactttg gccaggagtc aacttgaaat 240
 caggcatagg agtgtttggg tccttggtcc agagatcaat gtaatcgagg atcaactttg 300
 gatccaaaag cagaggcaca tttgtgccct tggctctagc ggccctgact tgcctatctc 360

tgatgttttc agcaagttct tcatcatcag c

391

<210> 658

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-G6

<400> 658

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cctgctgcc aaggctcaggt ggtgggatgg ccaccagtcc gcagctatcg caagagcacg 120

atggcaacca ccaccaacca gctgaagagc agcaaggagg attctgacac gaagcagggg 180

caagagtttc tgtatgtcaa ggtcagcatg gatggtgctc cttacctgag gaaggttgac 240

ctcaagacat acaagaacta caagggcatg gttgtggggc tagggaaaat gttcattggc 300

ttcaggacag ggaaggatgg tgaatatgtg atgacttacg aagacaagga tggagactgg 360

atgctgggtg gtgacgtcgc atgggagatg ttcaccgagt cttgccgg 408

<210> 659

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-G9

<400> 659

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ccaccctgct cctttgggag agtcaacctg tcccaacca cccagtgatg tttatgctcg 120

tctctctgat tatccacca aaatcggcat atcatgtggc taatgctctc acatagggac 180

ttagtgaggt caaacaggc catagcatag gcggggattg cctgggctac ggTTTTgatt 240

aaaatttctt ttcccttttt tgacaaaagt ttgattttgt atccctgaag cagctcccaa 300

attctgtccc ggaggtactc aaagcagagg cgacgcgact ttccacata acgtggtaaa 360

cctagatact tgccctgctg ttcctcattc tgaagtccaa gtaagttcag aaagatttgt 420

ttc 423

<210> 660
 <211> 172
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-H1

 <400> 660

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 ttcgtgttgc tgttgctgct gcagttgttg ctgttggtgc cattgcgggt gttgccattc 120
 ttgttgctgc tgtcgttggt gcctgttgct ggtgtcgttg tcgttggtgt tg 172

<210> 661
 <211> 411
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-H2

 <400> 661

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 aacatgaccc cgcgagacgaa ggggtgcagc ggaaaccca gtccatggac aaagtgggcg 120
 agaaacacga ccctctcgtg ggggtccgga gttggagtga cctgcccata gtccggtagc 180
 cgggtgcgcta tgtctgcggc caagtatctg gccgcccga gattcgtgat gtgcttctcc 240
 ttcacgggtg aggccacca cttgcctcct gctccggaca tgtctatctg tacggagaag 300
 atttggaacta ggggtgctga gctcggggag gtaaggatga gcgaaggagg aagagggcat 360
 ggggtgaaaat gaggggtcct tatcccgta tagaggccac gaagtgggtc g 411

<210> 662
 <211> 435
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-H3

 <400> 662

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 taacacactc ggttttcaat atcaatcgtc cgatgaacgg cggcactccg gctcatgacc 180

ataagccgca ggtcaccagt aagattgctt catttcagca gttcatcgct catgacttcg 240
atgccagtga ccacggcact tcgagcttcc cggttgcagc tgttcacagg atcggcatat 300
tagacatcag gattttcaac actgacaggc atggtggcaa tgtcctgggtg aggaagcttg 360
atggaggaac cggccgcttt ggttgccaaa cagaactggt cccaattgat catgggctgt 420
gcttaccgga gaact 435

<210> 663
<211> 433
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-H8

<400> 663

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ggctgccggg ggcggtatgc tctcagcgct caccagctga gccccgggcc cgctccagtg 180
accggcctgt caacggcgac cgaocgcttg gtattctggt gcttcggctt tgttcgtcgc 240
ctgtgttaag gccgatgttt ttgtgaacat gatgtggaca tgacaacggc atcctacccc 300
ccctaagtaa ttatggacga cggaggcggt gcagtgtgta ctgtactgca cccctagat 360
taggagctga tcgatccttt ggcgagctgt gttgttatgt aactcgagct cgtgccttca 420
tccaaggcaa ccg 433

<210> 664
<211> 372
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-A1

<400> 664

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gagagagagc atgggatcct gtatgtaatg cctggctctg agtccgaact ggtggtagtc 120
tgtagcgctg attgatcttg aatcacgct gaattgaagc tggaaacttg atcgtttagc 180
caattacaaa aaaaagagaa aaaaaagaa aatagaagca gaagagagta agaaaaggga 240

agagagaaga cagaggaaaa agcaaattggt gaaagtcaag ggacgaaaaa aaagcgggccc 300
ccctaaagga ttcaagctta atttagcgtg cagggaaggt caaagccctt ccaaagtgtc 360
accaaaattc aa 372

<210> 665
<211> 436
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-A5
<400> 665

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agcaccatgt tatgtatgtc tcttgaaatg actgtatatg gtctgccacc tatatatgtc 120
ttgtctatga tctgccacct atatatgact gtatgatctg ccacctttat atatgatatg 180
acttagtagt gttaacaaaa aaaaataaac tccaacatgt acccgcgcaa ggtgtagttc 240
agaaagagac aggagtaaat acccatgttc gtacaactct tcacatcaaa aaaagtggcc 300
cccctaaagg ttcaagtctt actatacctt gaatgaaact taaaacttct tcaaaattgc 360
cactcaattt aaatccatgg cctttctttt aaaaattttt aaacgggaaa aacccgggct 420
ttaccaattt taacct 436

<210> 666
<211> 358
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-016-Q1-E1-A7
<400> 666

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aggatattgc tctggcatct tttatcagcc ggcagattgg tactacgtat cctccagcct 180
acttttttca gctggatgat gatcgtgatg aaataagact gtaggttagt cgagtgatga 240
tgattgtcgg catttgcctt atttttaatg gacgcgtatg cttgcatgta acctgttgtg 300

gacttgcatt tgcattgtg cgatcgatat gaaaatatga gagattttgt tgggtttc 358

<210> 667
<211> 367
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-B1

<400> 667

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tatatacgct cttctcaaag ggaagcacgg atttgatact tgtgccaaag ctggtttttg 180
aaatcataag tgaataacat tttgaacagt ataatttcat tgtcacaatt acaatcaaca 240
tategcaata tcttccatgc tacacacact agatgcgggt cccaaacata atgggtaaat 300
ttgtactcgc ccatccagca acaatcatca atccattgat tgcaccaatc aacgagtgcc 360
tctact 367

<210> 668
<211> 392
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-B2

<400> 668

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aatcaaactc ttctgtgaca aactggagc tattgccctt gccaaaggagc ccaggtttca 180
caagaagacc aggcacatca agcgtcgttt caactccatc cgtgaaaatg ttcaagatgg 240
agacatagaa atttgtgaag tacatacgga tctgaatgtc gcagatccgt tgactaaacc 300
tctctcgca gctaaacatg atcaacacca gaactctatg ggtgttcgat tcatcacaat 360
gtaactagat tggtgactct agtgcaagtg gg 392

<210> 669
<211> 410
<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-B4

<400> 669

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catatattgg ttcacctgtt ttctggattg gcgttgggtg agcattatct gcggcatttt 120

ccatgggtctc ttcatgggta aagaaatatg caatggaaca agcattcaag tcgatgatga 180

cccaggcacc accaaacaca ttgggtgcaa actcgccatt cccattctcc atgccaccac 240

aggcagggtc cacggcacca agtagttacc catactcagg accaaggaaa aataccccaa 300

aaggtgcaac tgttgatgtt tcagctactg atgtggcagc aactggatct tcggaagcag 360

ctgatgtggc agaaacatcg aagccttcaa agaaatttgc cttcgttgat 410

<210> 670

<211> 379

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-B5

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gtatggacat ggaactgggc ccctttggac atgaacgggtg gctctcctct agacattcca 180

caagtgaag cacgtcgtgg gcacacctatt tgcgagtgtg agcatcgtcc acctacagta 240

atgtgcaacc acattgcac attccaacgt tcggcacact actgattcgt cacaggcctg 300

agaatctcat ttgcctcaca acatggagat atcagaacag ataagtatga tgcattagct 360

agcttttcag gggtttaag 379

<210> 671

<211> 391

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-B7

<400> 671

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 ctaaaaagac ttatatattag gaacggaggg agtacatgac ctaatacaaa cacaatgatt 180
 caagtagtaa ttgaagtgca gaaggacaag tatttgagaa tagttggata gcctataagg 240
 tcctctgttt tgaaacagag ggtttgtact gataatTTTT tcattctaga ctaagatatt 300
 ctagagcaac attgggtcatg ccagatgatt ttgatattcc gaaggactac aagtaaagca 360
 caatgctgca ttacacacct ttaaaagctc a 391

<210> 672
 <211> 452
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-B8
 <400> 672

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 acgtgtgctc gtggacgggg ccggtgaagg tgcaggacgc cgtggtgacg gagttccaca 360
 tcgggtacga cggcggggcg tggtagcaag tgagcaccta ccagtcgcac atgcgcaccc 420
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<210> 673
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-C2
 <400> 673

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cttccccgctt catcaagcgg gtccttggct ccgtcggatg tagattccat tccgaccgcc 180
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ggggaggctc cggaggtgcc atagggcaac ctcccgggct tcgtgccgaa ctccgcaccg 300
gaacccgcag tggttccgga gtccggcagg cggccccttc gtaagaaggg aaagaccgtg 360
acactggcag cctccgttca accggaggcg ccggacaaac ttgttggagg cgctc 415

<210> 674
<211> 429
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-C6
<400> 674

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acaagatcta catcttcaag gtgctgaagc aggtgcaccc cgacatcggc atctcctcca 180
aggccatgtc catcatgaac tccttcatca acgacatctt cgagaagctc gccggcgagg 240
ccgccaagct ggcgcggtac aacaagaagc caaccatcac gtcccgggag atccagacct 300
ccgtccgcct cgtcctcccc ggcgagctcg ccaagcacgc cgtctccgag ggcaccaagg 360
ctgtcaccaa gttcacctcc tcttaggctg ttcgtcttcc tgtgtctcgt agttagcggt 420
tcgggtgtg 429

<210> 675
<211> 355
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-016-Q1-E1-C7
<400> 675

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gcaacgacat cgagctcgtc tcccgtccg ccgccctcat caaccagaaa tgccacgtca 120
agaacaagga tatcaggaag ttcttggacg gtatctacgt cagcgacaag ggcgccatca 180
aggaggagta gagtgcgaaa accgtcccag aagccgtgtt tctgcctgcc gtgtttcatc 240

cataccctcg aaatcacttc aatcggtg

388

<210> 678

<211> 418

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-D2

<400> 678

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ttatgtaatg aagtcggagc atgatttatt tattgattgt cttccttatg agtggcggtc 120

ggggacgagc gatggtatgt tctaccaat ctatccccct aggagcatgc gcgtaatact 180

ttgctttgat aacttctaga tttttgcaat aagtatatga gttctttatg actaatgttg 240

agtcacatga ttatacgac tctaccctt ccacctttgc tagtctctct aataccgcgc 300

accttttgcc ggtatcatat acctaccata taccttctc aaaacagcca ccatactac 360

ctattatggc attttcatag ccattccgag atatatttcc atgcaacttt ccagcatc 418

<210> 679

<211> 368

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-D5

<400> 679

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gtacacatct gtttgggaga ttactacaga tggaatcaac tatttatgat gagtcactct 180

aacgtccttc atcgtatgat cttttaagtc aagatactct ggccctatat gcttactaa 240

cgtgcgtcgt aaaataccgg tggatgatgc atgttatata tgcacatgat gacccaagcg 300

tgtgttagat tgatatgcta ggcattgata ggatcaggct atctagctgt ggatctgaag 360

taaccct 368

<210> 680

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-D6

<400> 680

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ccctaggagg ataacgcccg accgacggca tgatctgtct ggccgcagtc cattgcgtgg 180

cgcatggggc gctcgaatcc tcctgtgctg gataattgct gtccctcttg gagccttcca 240

atctccattt ccccatcacc agtccgctgg agtatgagtc ctaccgggac cgggtgtgccc 300

gtcgtgggaa ggagaggatg agggcggcgg atgccgcct cgcagccgac atggccgtgg 360

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<210> 681

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-D7

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cgtggatcat gtcacacca gttgaaatgt ggtattctct tggagcgctt tctcatcatc 180

ctacatttcc actctgtttg ttgagattat tgattttatc gatgccgttc gtactccaac 240

aaatacggtt cctgtacgcc actattattt atttggtttt gaacttgaca ccttatttca 300

ttctgggctt gtaagttagt gttgcaagag ttgatgttgc aagagttgat tttaactcga 360

aaaaaaaaa gagaaaaaaaa aaagcggccg ctctagaaga ttcaagct 408

<210> 682

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-E4

<400> 682

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 aacaagacac acagatataa actcttcaaa tctgaacaat taaatcaggg aggacacata 180
 catacctcca tgccgccacc aaaaagggca gagtaatttt tttcgcaaga aacatcatga 240
 tcaccactag acaccgataa aaaaataatc tattgatgat ccgagggtccc tcaactctcg 300
 tgaagatgac agctgaagga gaggggatta aatatatctc cgatggccga tacttctca 360
 aaccctagcc aactgttgat ctctagccag cccgcctgga ccaactcaag gtcagagtgc 420
 gacactgctt tc 432

<210> 683
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-E8
 <400> 683

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 accccaagta actccatgaa ggccttccac ttgacagaaa gcaacttgcc attagtcac 180
 caagtcagag tccattcggc atcagtcacca agatggacag tggcatagaa ttgggccacc 240
 aaatttgcac caaagtcctt gttgaattgc atgatactga ggatgttcag ccgagtgcac 300
 atctaaaggg cttcgccaaa gtactcaggg tcttctcca tagaatccgt atcgatggag 360
 cgcacatcaa catatagatt cttcttggcc ttgatcacat caaagtagat ggcaaattga 420
 aaatgattct aga 435

<210> 684
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-F10
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attctgctcc tcgatgtttc tagagtatat ggacatatat aggagaaaca agtcgggtcag 180
gggaaccatg aggggcccac gaggggtggg ggcgcgcctc cctgccttgt ggcttcctcg 240
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ccgaaggttt cattccgttt ggactccgtt tgatattcct tttctttgaa acaccgaaat 360
aggcaagaaa acagcaattt gggttgggct 390

<210> 685
<211> 377
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-F11

<400> 685
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ttgaaggcca tcaagaagcc aaagataatc gtggatcatg tcatcaccag ttgaaatgtg 120
gtattctctt ggagcgcttt ctcatcatcc tacatttcca ctctgtttgt tgagattatt 180
gattttatcg atgccgttcg tactccaaca aatacggttc ctgtacgcca ctattattta 240
tttggttttg aacttgacac cttatttcat tctgggcttg taagttgatg ttgcaagagt 300
tgatgttgca agagttgatt ttaactcgaa aaaaaaaatg aaaaaaaaaa aagcggccgc 360
tctagaggat ccaagct 377

<210> 686
<211> 444
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-F2

<400> 686
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aggtgctctt ttaattgcct tccttatgag tggaggtcgg gatcgcgcga tggttaactc 180
ctaccaaccc gtcccctagg agcatgcgta gtagtacttt gcttcgaggg caagtagact 240

tttgcaataa gtatatgagt tctttatgac taatgtgatt ccatggatat acgcacactc 300
atccttccac tttgctagcc tctattatac cgtgcaactt tagccggtat catgcaccca 360
ttatttacct tctcaaaaac agccaccata cctacctatt atggcatttc catagccatt 420
ccaagatata tttccatgca actt 444

<210> 687
<211> 395
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-F4
<400> 687

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cctgaataaa gttctgacaa aggataatga gatcactccc tatgagaaat gggcaaagag 180
aaggacaaca ctcttgact tgcgctacttg gggctgtttg gcgaaagtca atgtgccgat 240
ccccaaaaag cctaagcttg gaccaaagac tgtggactgc gttaatttgg gctacgcgaa 300
gaacagtgtt ggctatagat gtctagtagt gaaatctgag gtacctgacc agacagtcgg 360
tacaattagt gagtctaagg atgctacatt cttcg 395

<210> 688
<211> 405
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-F5
<400> 688

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aggattcctt ccttatacca tgccttatgc acaaatatca tatttttata gaggcgacca 180
tcagaatgca ggcgcgagcc cctggggact cgtcagcaaa aggtatccgg gccaggaagg 240
ctcaagagga aggcgggttag ggtcgaaaca ccatcgaga ggtatagttt aattctgctc 300
tgtgattatc atgctagaaa tgtaacagtt tccatcgtgt cctggcacia agagtagtcg 360

ccagactatg tccggagatc ctgccggtca cgcctccacc agccg 405

<210> 689
 <211> 375
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-F6
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 aaccatgttc cccagcgtac catcataaac ctgtgtcgtc tgattacccc gcgatcttga 180
 agttgcaccg tatctgtgac gctgaatggt gttaacgttt tggattgtct cgataacttt 240
 atattagaat tgaatgcaag ctaaattgacc ctgaaattga aaaacagctg acgcgctata 300
 ggatccagtc ttacgtacgc atgcatgcga cgtcacagct cttcaacatg ttcacctaaa 360
 ttcaaatcat tagca 375

<210> 690
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-F8
 <400> 690

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 gcacttgatg tgtggcagca cgtgtgctgc ctgaattagc accctggact gactctggag 180
 acgaagcatg gtgtagtggc aagtcgattt gctgacatag cgcgggcgtc tttctaattgc 240
 ttcggttctg tttagctact acgatatggt gcgtgtttcg gtttctactt cccaatcctg 300
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<210> 691
 <211> 428
 <212> DNA

<400> 693

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gtgaaaactc tcgggttcac atggattang gaaggcatag gttcaacca tangggcatc 180

ttaggaacat ataccacaaa cctcaggagt aatataacac aagctcgaag gcagaggata 240

caatttacca aaggcattat gtatccgagg aaaggctcaa aagggtatta aatatgaagg 300

acgttgtcgg ataaaatcca acaaaggatc tggcgggtcca cataggatct gatgtgagta 360

tcggtactca accagaagaa gaaagaatgc aaaggcatca gattgtagat atatctggat 420

aacttcaaag cttgaatac 439

<210> 694

<211> 447

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-G4

<400> 694

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tccctccgcc ttctgtaga ttgcattgcc tttcagccgt ttcgccccct ttgcttcttc 120

tccccattgc ttctacctgg tgccatggtg ggcgagctga tcacgaagta cgaggtgagg 180

ctctgacac aggagctcca tgccaaggat gcggagctca gggccaagga cgtggagctc 240

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cttcaaaagc ggcagccgtc caccacaaag atgctcgagg cgttggcggc gttgctgcag 360

aaagagggag atacgatagg ccgtcagggg agccggttgg agcgcgagcg ggccgatcgt 420

gacgaggtcc aggatcgctt cagccac 447

<210> 695

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-G5

<400> 695

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caacctgttc cgctgccgca gttccacct cggcaccctc tcaggtgctt tgctggtcgt 180
tgcttgggtt ttccaactct gcaaaacgtc acccaccctt ttcgtggaca ttgttcttgg 240
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tagcatatgt gcacggatac agctagtcct tctgcttatt ttgtctttca aggataacgg 360
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<210> 696
<211> 376
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-G6
<400> 696

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ggaggcgcg cgcgcgcgag gcggggcgcat gaaactagct gcaaaccatt gttttattgg 180
cgcatgggtg ttgtgctcct atttttttga gtctttttta gattgtcatg ttgtctgggtg 240
gagagaatat ctgttgggtc tccaattggg cttctgtttt cagagttatc acccgttcct 300
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gggcatatgt atatac 376

<210> 697
<211> 447
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-G7
<400> 697

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aaacataatt ttttcaagga cgagaaagta gagtgcactt cacatcgagt gtaaataag 180

cacaacacta tcaagaagtg aaccgcacta cttttttgct tctgtaagaa ttttttgcac 240
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 taagttttct cttttttcaa acttttctac gcttatttgt gaacctcatg gtcaaagtta 360
 gtgaaccgcg tggcctagac tagagaacaa catttttttg ttggtgaaag taaatcgag 420
 ggagaaaact attggacttc attaaaa 447

<210> 698
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-G9
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 ccttggcatc aaagctgcca atggtgtagt tattgccacc gagaagaaac tgccttctat 180
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 gcagtattat cggttgtaca aggaaaccat ccctgttacc cagcttgtcc gagagactgc 360
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 g 421

<210> 699
 <211> 425
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-H10
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<210> 700
 <211> 437
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-H3
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 cgtgagtatg atggaaagga aaattgtgct caagtgctag aagaagaatg cattaaaatg 180
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 tataatattt tttgtcccc aagttttgat gagaatattt attatgatga aagcatgcct 360
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 agtgatccca ctatttt 437

<210> 701
 <211> 474
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-H6
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 catggactca atgccaatca cctcatgac gcggactaca cccgtgatct caaggtggat 240
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<210> 702
 <211> 311
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-H7
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<210> 703
 <211> 363
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-017-Q1-E1-A1
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 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-A6

<400> 704

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atcagc                                     426
  
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<210> 705
 <211> 299
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-A7

<400> 705

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attcccgagg tgacattggg gtaatctatg cataggggtt gatgcatggt cttgtctttg  180
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<210> 706
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-A8

<400> 706

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<210> 707
 <211> 417
 <212> DNA
 <213> Triticum aestivum
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<210> 708
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 <213> Triticum aestivum
 <223> Clone ID: LIB103-017-Q1-E1-B10
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ccaaggacag agatgacact tatccggcct ggcattctca gcatgttgta tgcattatga 180
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accggcaaca tgatctttcc ctccagcttg ctcttcccg aattgattcc ttggaatgtg 360
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<210> 709
<211> 110
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-B6

<400> 709

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<210> 710
<211> 428
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
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gagcgtggag acgtacaaga tctacatctt caaggtgctg aagcaggtgc acccagacgt 180
gggcatctcc tccaaggcca tgtccatcat gaactccttc atcaacgaca tcttcgagaa 240
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ggagatccag acctctgtgc gctcgtcct ccccggggag ctgccaagc acgccgtctc 360
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<210> 711

<211> 425
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-017-Q1-E1-C3

 <400> 711

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 ggaaagtcgg caacgtcaaa agtgaccctc tcagtccctga agttcagctc actgccaaat 180
 gtcaccggca acgtgatctt tcccttcggc ttgctccttc ccggattgat tccttgaaat 240
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 atcaggttca agccggcccc gccgtcaact agcatcttag tgaccttgag gttgcggata 360
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 atatc 425

<210> 712
 <211> 318
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-017-Q1-E1-C6

 <400> 712

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 cgacaccgtg ctgtccccgg acaacctggt ggtgtgctcg ggaagtacga ctggagggag 180
 atggtgtacg tcggggcctc gtcggagagc cactcggcca acagctatct cagccacggc 240
 ccctcgccgc tgtgctcgcg cggacactcg aacgtgttgc tcgagagggt acccaggctg 300
 tagggaagcc acgaccgc 318

<210> 713
 <211> 436
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-017-Q1-E1-C7

<400> 713

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gcagagcacc cctgaagatc aaggactgtc tagacaatgt aattcatggt aaaagagatc 120
cagtcacatt cataactcaac ataaattaat agcaatgcat gcaaatagata gcagttctct 180
ccaactggtg ctttttaata agaggatgat gactcaacat aaaagtaaata agataggccc 240
ttcgtagagg gaagcagga tttgcagagg tgccagagct cgagttttga aacagagata 300
aataatattt tgagcggcat actttcattg tcaacataac aaccaagaaa tctcgatacc 360
ttccatgcta catacattat aggtggttca caaacagaat ggtaaagttt atactcgccc 420
accaccaacg agcatc 436

<210> 714

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-D1

<400> 714

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agggatgcc a gcgttattgg catttcgtca cactagacct atgcatgtat ctggaaattt 120
agggctcatt atcgagggcg ttactcagcc cagtatatgt tgtaaagtcc gaatacctta 180
gggagtgttc ggcgtcgcga gtttggcctt atatgcatca gctccaaatc atgtcttggg 240
tcaatagtgt gggtttcccg gctcccgtgt ttttctacct tacgttttgc tctatcggct 300
aagggtggcac cagggagaac tactgcatgt gtaccctggt tcgtctggat gagcacctta 360
gtagagaaa cgcgaaaactg actgtcatga tatagcgca gactggtc 408

<210> 715

<211> 230

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-D3

<400> 715

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ccatcctgac aagtgaagc atccacaagc acaagaagct tttggagccc tggcaaaagc 180
acagcagctc ctacgtgatc cacacgaaag aaggtacatt cccgattaag 230

<210> 716
<211> 432
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-D9

<400> 716

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tggtagagat attggagcag atgagatgag agaataacct tgaagttcag tggtttgtaa 180
taggaagcat gctcgacgggt gcaatcaggg tcaatcagct ccgtgagccg tgctatgtcc 240
ttgtcattga gggaggaata caactcctga atcacatctg tcagggggga agatggtaag 300
gcattacctc catctccctg gtaagctttg ttgagaccac tggttgcttt tggccctgggt 360
attgategta tgggcttttg tgagcattgt tgtctcttct cccacttggc gcttatctgc 420
tgtcgtcggg ac 432

<210> 717
<211> 421
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-E1

<400> 717

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gcaccatcgt tctgatctc cacggtctct gcacctctac aagagagttt gtcacatgc 180
acagccccag taagcgggtg attacctctg tgtccaaacg ccttgccgtg tccaatctcc 240
aaggetgggc agacctcca gatgacctgc tgactcaat tgttgcctc ttgggctcct 300
ccattgaact tcttgctttt gctgccacct gccgccttg gcgtgccgt tcttctcac 360

acccatccaa atctaccttg tgctttctcat gccccctgt tctcaccga aaaa^{...}cccca 420
t 421

<210> 718
<211> 402
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-E2

<400> 718

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agcctcaggt cgcgccgcg cctccggaga ggtcatcgtc ctgcgccgac cacagcaccg 120
caaacaacaa cagccaccac gactggcgcg aagggtcgtc ggtgctggac ctcaacgggtg 180
acaactactt ctcgtcgcc gtcgggagga agcgtccaa cgcccggtac ctgctcaact 240
cgtcggagga cgtcgtctcc ttcctcaagg agatggccga gtcgacgacg ccccgtcgcg 300
gtggcctccc cccggcgcc gccgctgatt acatgttctt ggataggcag taagactaag 360
tttgctctg ctaatcagca atcacccggc ccgccggccc gc 402

<210> 719
<211> 95
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-E5

<400> 719

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agtttggtga ttgtaggagc attgagacgc aaagg 95

<210> 720
<211> 355
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-E6

<400> 720

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caattatttg gcggcttgtc tttagtttcc tttgcgattc tttcccttgt ttaagtttac 120
 cctgtagtgt gtgtgtgtgt ccttgcgaga ctatttcggc tctctgtctg gtctctgcga 180
 cttggtagct tctcatgggc tccatggtgt tggatgatgt ggagggagga gggttcgtgt 240
 tagctaagtt agtccactcc ctctgttcgt gttttgtaag ttaattagta gtatgtgtgc 300
 tactagtata tggaacttta aatcggttca ccggcgaaaa agagcagggg ggcgc 355

<210> 721
 <211> 137
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-E8

<400> 721

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<210> 722
 <211> 421
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-017-Q1-E1-E9

<400> 722

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 ggggaggacg aaggccaaga ctctgacgac gacgacgaag acgaggacga ggactcggat 180
 gaggaggagg acgacgaaga cgaggaggag gaggaggagg aggacgacga gtagcatggg 240
 atggaagtgg agcctgtggc gttcgcattt ggggtaggat gaaatgaaga tgcaagtagc 300
 tgaagggctg gtttgactg atgcttaact gtatgtaagg gatggcactc ggtaaccgaa 360
 tgttgccgat gaagaatatt gactgcggca tgactaaata ttgtcctcag ggttgatggc 420
 t 421

<210> 723
 <211> 407
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-017-Q1-E1-F1

 <400> 723

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acacagacta aattctgaat cagtttagag acacaagaac attattaaga taaagtggtc  180
tagagggtga gcgaaaacta gtggaaccaa tgtgagtgat aggaagacca acaccattac  240
cgacaatgat acgagaagaa gtgtggatag gagacacgga agagagggtta cccgggtaag  300
cggccatatg cgaagatgca ccgatgtcca taaaccagtc gccaccgtcg gaataagccc  360
cggtcggggg ctatttgtca ggtgcaacga gtagtgtcgg gtcataa                407
  
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<210> 724
 <211> 382
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-017-Q1-E1-F2

 <400> 724

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ataatccgga tgtggcctgg cgactccctt cccaatagct acttcggcct ggtgaggcgg  180
cttgtagatg cctgcccatt gctggagggt ataaagcggg ccgtctgcat cgaagggtgca  240
cgccggggcct ttgcccattg gaagctgcac tgggccaaga tggacgccga gaagctgggtg  300
aaggangggc cgccgcgggg caaggagcat cgccacccca aaatgtatta tgagggtgtt  360
ctgaacgggtg cctgtcttgt gg                                382
  
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<210> 725
 <211> 390
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-F6

<400> 725

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gggacgtcc tgtctgaaat atgggaaagt tacggacgta tccccattt caaatttgga 180
cgtctcgtcg gttggggata ggacggtaat ctgcgcatctc ccaagtattt gccggtaact 240
atttcgggcy aggagagggt gttttgctgc ccacggttgg cgcccatggt gtatgaacgg 300
ggctgatacy tacggcggtt gtgtcacgtc tgatggaagt tacacatctg cccctattta 360
aaatattagc ctacatctac ttcggacgag 390

<210> 726

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-F7

<400> 726

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gagcggcaag tacacgctcg gctacaagac cgtcctcagg accctcagga actccaaggc 120
aaagcttgtg atccttgcta acaactgccc tccgctccgc aagtctgaga ttgagtacta 180
tgctatgttg gcgaagatca ctgtccacca ctaccatgga aacaatgttg atttgggaaac 240
tgcggtgtggt aaatacttcc gagtctgctg cctgagtatc atcgaccctg gcgattccga 300
catcatcaac gcaacaccag ctggccagta aacctgtgta tgccattttc agtgtctcgt 360
ctgatgcgtc atctaagggtg gttctagagt gtagttcttg ctggacttga tttgggtcttg 420
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<210> 727

<211> 311

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-F8

<400> 727

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 caactgcctc atcagcgctc tgctgaactt aactggccg gggttgtact gtccggattc 180
 agtcatgcac ccggatcatc gggctcttggc cagcagctgg gagcactggg aagcggccct 240
 ccacgcggag catgggaccc atcccaaggc catgatcaac actttctggg tgagttctct 300
 tcagaagcac a 311

<210> 728

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-F9

<400> 728

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 gagcagcaga atgccccagg tgcataatgt tctacagaag aggtgaagga ggaagtaaag 120
 tgcataaaag ccattataga gaggtgata cagaggggaag gccatcttgt agtcatagac 180
 gaaggaacag cggcagcaga aggtgctgca gcaagggcat cggagcacag aatcctggct 240
 gttaaccgca actacgtcat tgattgatta accagctgag gacacagcta actagatcca 300
 tcatatgtgg ttgaccaata gagcagacat tcaaacggaa gacatcctgt tgtcatatgc 360
 tctagaaatg atatgttgta cctgccatcc ccttcccaag gaagcataag atctctggaa 420
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<210> 729

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G1

<400> 729

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 atatgggatc accctggaac gacgtccgca gtgtagaccg gactgcaaag cctgtagcac 180

caagaatcgc tgaccaatag aaaatactgt ttgatatatt attaatatgc acatcgcgaa 240
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tac 423

<210> 730
<211> 408
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-017-Q1-E1-G10
<400> 730

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agtaggactc tgctctacta ctagcaccgg aggagtagta tattctaata taaaatagtt 240
acaaacttcg atgcccgatc gtggaacgac tacaaaccat gctcaaagac cgtgtctatg 300
tggtgtttgg acttatatgc aaaaaaatag caagatgcc gtgcattgca cgacacatca 360
tcatacacia ctcggttttt tctctactcc tactcctata aaacactc 408

<210> 731
<211> 439
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-017-Q1-E1-G5
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gatggagcag gaggaaggga gtgacggcga tgaagacgat ttcccgcag ccttcttctt 180
tgtgaggtat ctgtgtgatc gggaggactg ctatggcatg cttgcgccgt tgccaccctt 240
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agaagacgag gttgaggctg atgctgatgc tggtgattgc agcatggacc agtaggatgt 360
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 tactttgggg gctgtttgc 439

<210> 732
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G6

<400> 732

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<210> 733
 <211> 452
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G7

<400> 733

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 ctggttgttt cgagcaagcc atggattgat gcttgttggt gcagggggag tataaacttt 180
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gcatccattg ctattaattt atattgggta tg 452

<210> 734
<211> 320
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G8

<400> 734

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aattctgcat cataactaat cggatttgtg agagacggga taggcgaatg cttgttcaaa 180
ttactgtggg agacatcgca ctttgtgtct tcattgcagt acattatttg tcacagattg 240
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ctgtgtgtag gtattgagtt 320

<210> 735
<211> 435
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G9

<400> 735

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agctgccacc aaatacacia ggagacgatg atccacaagg cagtgctaaa ggcgtgatta 180
acgtgcatac attttgaatg gaatggcctc cttttagtgt tttgtgggta gtagactttc 240
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catgcgaatt ggtcttaaaa cactgtaacc acaagatgat ggataccatt tgcggccgtg 360
gcattgatgt gcgccagttt ccacaagtca tgtattttcc tgaataaaaac agaaaaaaaa 420
aaaaaggaag caaaa 435

<210> 736

<211> 238
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-017-Q1-E1-H4

 <400> 736

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 tagtctagca ataactaata gcataccagg ggaacactct gctagcctta caaccattaa 180
 aagacttgag cgacatcatt tggacacgag tgtgatggct agccatctcg accttctc 238

<210> 737
 <211> 391
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-017-Q1-E1-H6

 <400> 737

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 agttggtgca aacttcactg gtgcatccaa accccatgat acaatacgct ctatcacaca 180
 taaacctcct tatatcttcc tcaaagcagc caccatacct acctacgatg gcatttccat 240
 agccattccg agatatattg ccatgcaact ttccaccgtt ctgttcatca tcatgacaca 300
 catcgtcatt gtcattatgc cttgcatgat cgtgtagttg acatcgtatc tgtggcaaatt 360
 ccaccatgca taaattttca tacatgtcac t 391

<210> 738
 <211> 441
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-017-Q1-E1-H7

 <400> 738

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ttgttggcat gggacgatcc ggcggatgag catgacctgg actacgttga cgagcttgat 180
 attcttgttc actagctttt ggacgcaggc ttgaagtctg gtcagctctt ccaaattctc 240
 ccacattagg cccgtctctt tccaggaggt gagccgtgtg gggaaaccag atcagaattc 300
 aggggcccgc gcccatattg ggtcacgcgg ctcggtgatg tagaaccacc ccgactgcc 360
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 catggcacct ccgcactccg c 441

<210> 739
 <211> 381
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-A11

<400> 739
 ctatattgag tcatattatc tcatcagcgt gcgacgaatc tccgcccgat cgaatctcca 60
 ggggtgataac agggatggct actggtagtg atgctggaaa gtccgctgag gcagtgttgg 120
 agtggcctaa gcaggacaaa aagaggatgc tgcattgctgt ttaccgtgtg ggagatctcg 180
 accgcaccat taagtgttac acagaatgct ttgggatgaa gctgctgagg aaaagagatg 240
 tcccagaaga gaagtacacc aatgccttcc ttggatatgg acctgaggat actaattttg 300
 cacttgagct gacttacaat tatggtgttg acaagtacga cattggagct ggctttggac 360
 attttgccat cgcaaatgaa g 381

<210> 740
 <211> 433
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-A12

<400> 740
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 tatgcagttt gaccgataaa gatcttcgta gaatatgtag gatccaatat gagcatccag 180
 gttccgctat tggttattga ccggagatgt gtctcgggtca tgtctacata gttctcgaac 240

ccgtaggggtc cgcacgctta acgttcagtg atgattggta ttatgagttt atgtgttttg 300
atgtaccgaa ggttggttcgg agtcctggat gagatcaggg acatgacgag gagtctcgaa 360
atgttcgaga cataaagatc aatatattgg aaggctatat tcggatatcg gaaaggttct 420
gagtgggttcg ggt 433

<210> 741
<211> 417
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-018-Q1-E1-A2

<400> 741

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aacgggctct cgattggttt tacatggcta cagaggcttg cggctgtgga actcccgatc 120
taggcttatt tctggggggtt tctggattta taggaatttt tggcatcggt ttcaagtcag 180
gggggtccat gagtcaagtga caaggcaggg ggcgcgccct ccacccttgt cgttgattcg 240
ggactcttct ggcccaactc ttgtgcttcg ggggcttctt ctgggtccata aaaaataatc 300
gtaaattttc agctcatttg gactccgttt gatattcctt ttctgcaaaa ctcaaaaaca 360
aggaaaaaca gaaactggca ctgggctcta agttagtang ttagtcccat aaataat 417

<210> 742
<211> 392
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-A4

<400> 742

actccctaaa ttgagtcgta ttaagccgac ggtgccggca cctactgctt ccatatcgcg 60
actcgtgagt ggagcatagc tggcgactgg ctcatgccct tcaatggcaa ggcggattat 120
gtccccgaac ttggactctg gtttggcatc aaacaagcca tcgtcccttg cgctgccgac 180
ctctcatgcc tctcagagg ggaggagctg tcgccagaca agatgcggat ctgggagcct 240
gatgacctgc cagaggagtgc gcagccaaag agcttgacaca attcgtgtgc tgtcagcctt 300
ggttctggca gattcatcat cgtggacgtc ttggatctca tgaaattcga caaggaatgc 360

aacgacatga gtccccgtcaa ggaacttgcc ct

392

<210> 743

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-A6

<400> 743

tcgcgggtcg atggtacacg ctaaagttag tcgtattatt tccttccgca tcaagagatc 60
cacacagctg aagaagctga tgaacgctta ctgcgaccgt cagtctgtgg atctcaactc 120
cattgctttc ctttttgatg gtcgtaggct ccgtggtgag cagacccttg atgagcttga 180
gatggaggaa ggcgacgaga tcgacgccat gcttcaccag accggagggt gctttcctgg 240
cccttagaag gagcttgctg cagcctggct gttctatgtc gtatgctacc tttagaacta 300
gagtaaaatg taagaagtga aagaacttgt gaggctatgg ttctgtgcca tagcctgagg 360
gggggtctgg aggtgaaaca acatcggagt actgttgatg tcgtgactga acta 414

<210> 744

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-A8

<400> 744

attccccggg cgacgggaaa gagagagaat aagccatcta gctaataact atggacccga 60
aggtctgaaa taaactactc acacatcacc ggagaggcca tggagttgat gtagaggccc 120
tccgtgatca atgccccctc cggcggagct ccggaaaaag cccaagatg ggatctotta 180
ggtaaaaaag gttgcggccg tggaattagg ttttcgtggt tctcctggat gtttgggggt 240
acgtggatat atataggagg aagtacatcg gtggagcaac gaggggcca cgagggtgga 300
cagcacgcc aggggggtag gcgcaccccc tgccttggtg cctcctcgat tgtttcttga 360
cgcccactcc aagtctcctg gatcacattt gttgtgaaaa t 401

<210> 745

<211> 441

<212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-B10

<400> 745

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atgcccgggt cgacgggggt cctaagggtcg gggaagggtc tgattaccaa cttgaaacgc   60
cctcgatgcg gctatatctc ccacgtgtcg aagcacgact tagaggcata accgcattga  120
aagcaatgtc gcaagtgagg taatcttcac acaacccatg taatacatca gggaaagaga  180
tacatagttg gcttacaatc gccacttcac acaattacat gaataaagca ttacatcatc  240
cagatacaat caaagtccga ctacggaacc aaaataaagg aagaaccca aatgcgacaa  300
gggtcccgat tgacccaac tgggttcac tactgatcaa ctagaatgaa aaacaacaca  360
aaggacaaga tcttcatcga gtcctcctg agcttgggtg cttcatctgc acggtctcat  420
cggcacctgc aaactggttt t                                         441
  
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<210> 746
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-B12

<400> 746

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tccccgggtcg acggggaaca cgatgctaag tcgcatcagt gacgtggcgg acggaggagg   60
gtgggggtttc gcggctggag cggagagggt atggtagcct gggatttcga atggcgaaaa  120
gggggcgatg ggagggggtg aagcatgact ttggaacgtg cttgtccaaa atgtagggtg  180
tgttacaaaa gtaccccccc accgatttga actagcggcc ctttcggctc agggttagaa  240
gggggattta gcgtgtcagg atttggcagc tggagggagt tttcgcgcac gttgtaattt  300
cgggatagca aggcgcgggt tgtgaaggcg ctagttttgg gagcacgata tctgaatttt  360
tgggatataa caagacgcag gttgaatttt tgggacaagc ctaacatgta gtaatattgt  420
acttgtagct accaaatcaa                                         440
  
```

<210> 747
 <211> 421
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-B6

<400> 747

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gtggaacatg ggacagagac actgtgctgc gtgccctacg tgctgcattc aacaaccg 120
agcgggctgt tgagtattta tattctggta ttcctgagcc gatggagatt cctgcaccac 180
caccaagtgc ccagccagct gatcctgccc aggtttcaca agcagctcaa cctgcagttg 240
cctcttctgg tcctaagtct agccccttgg acctcttccc tcaagccctg ccaaagtctt 300
cagcaaagtc tgctggtgaa ggaaatctgg atgttctacg aaacaatgca cagttccgaa 360
gcttactttc tttagtgcag gccaacctc aaatcttaca gccattgcct caagagctgg 420
g 421

<210> 748

<211> 412

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-B8

<400> 748

cgcgtaggtc gatgggggtc cctatagtga gtcgtatgac ttgctgatga tccgcgaaac 60
ctggagactc gaagtaacag gcggcgact cgggtattc tattgcagac aaacaaacaa 120
acatacaata agtactcatc taattcacag gtaaaactca aatagaagat cgaaccagaa 180
agttcaactt aagaactccg gtttgcaaaa aaaaacaaaa caaatgaagc tacggaagtc 240
aaacggcgaa agaaaacagc ttcgttttac taatctggat ctaagtcaaa ttttcaaaaa 300
gcaaaaactt gtttaagttg gttattcgga aagagggttt cgagacgaaa ctccacacgc 360
ttgaattgcc tgattccgat aaacgagcga aaagttatac taaaacgaaa at 412

<210> 749

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-B9

<400> 749

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 tggagctttg aggtcgagct tcgagaggag aaagcttaac tagtgtggct cgggcatttc 120
 atcgaacacc tcatgtgcat aggaggtgag atagagcacc acaaaccct cccctcgccg 180
 gccagaaaa acagagcact agagtgtctt gctctggcgc gagggttata tataggcagc 240
 accactggtc ccggttcatt gcatgaaccg gcactaaatg ggagcctttg gtcccggttc 300
 ttgccacgaa ccgggaccaa tgggtggggg ccaagagcca ggcccattgg tcccggttcg 360
 tcccaccaac cgggaccaa agttccagac gaaccgggac caatggccca cgtggcccgg 420
 ccgccccctt gggtc 436

<210> 750
 <211> 400
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-C10
 <400> 750

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 tccttaggtt tcagttctcc tccgcctccg gtctcgagag ctcgccagaa tggtcgcccc 120
 caggttccac cagtaccagg tgggtgggtcg cgcgctgccg acccccggcg atgagcagcc 180
 caagatctac cgcataagc tctgggccac caatgaggtc cgcgccaagt ccaagttctg 240
 gtacttcttg aggaagctca agaaggtgaa gaaggccagc ggccacatgc tcgccatcag 300
 cgagatcttt gagaagaacc ccaactacct cacgaactac ggcattctggc tgaggtacca 360
 gagcaggacc ggttaccaga gcatgtagaa ggagtagcgt 400

<210> 751
 <211> 360
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-C12
 <400> 751

tatagtgagt cgtaataaca tgtacccaaa ccagtcgagg tctttgtccg cgccccactg 60
 cccgtcggta aagcggcatc gcagtggtag cgacaccagg agctgaccga ggtagaagag 120

gagctgagac ccaagtggca ttactgatgc tgcggttgcc aaatgcctat ttttgggtctc 180
 tgtgtatgct gctgttgctg ctggagcagc tccgcgtgat ccagttgcgc accgacatta 240
 tgtttcttgg atgatcttat agggatgaat tcatagttct agcttaggat cagctgatga 300
 aaatgatcca ggaaacctcg agtgaaatgt tgctgtgggtt acacttggtg catatatatg 360

<210> 752
 <211> 412
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-C4
 <400> 752

ctatagttagc tcgtatttagc taagttttct tcatttaatt agctatagac tcaaaattgt 60
 cttttcacct aggtaaatgc gcttagcacc gtttcttctt tgggtcagca aactagtctc 120
 tctcttcttg ataaacttgc aacatcagac tttatgctta ggtggcaagc ttaagcacct 180
 gtaggagcaa gtaaaagtaa gtacaatagt gcgttttaca tggcattttt gcatatgtgg 240
 aggaaagaga ggcaaggaaa aagtggagaa gtgggatctc atgcaagagc cagcctctac 300
 tacatgggtgg agcattggga gactcacgcc ggctgtagcg ccgcagttaa aatgataatg 360
 gcaagtcaaa tcacgggggc ccacctgtcc agcagtaact ccctgttaaa tc 412

<210> 753
 <211> 255
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-C5
 <400> 753

cctatagtga gtcgtattaa gttcttgatg catactcagg atatcattac atcttcatgg 60
 cagaagaaga tgaggagaaa accgcattca ttactccatg tggcacatac tgctttgtac 120
 ggatgccttt cggactaaag aatgctgggt caccatttgc aagggtagtt cacgaagctt 180
 ttgaaccaca gttgcacaga gatgtataag cttacatgga ttacatactg gtcaacagca 240
 cagatagacc aactc 255

<210> 754
 <211> 250
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-018-Q1-E1-C6

 <400> 754

 atagtgagtc gtattacgtt cgcgtacctg aacccggtgc tccggccctt gttagtcaca 60
 gcaactggct tgtatccagt gtgggtaccc ctgaactcat cctcggatgat atcggcaaac 120
 tggttggcct ctagecaaaa cttgctgttc ccggcggttcg tggactcgtt gaaagcaacg 180
 ttggccttga aaccctccag ccgcctgtgc tttctcggca gcgtcaccgt acacgcggcc 240
 atacttgccc 250

<210> 755
 <211> 423
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-018-Q1-E1-C9

 <400> 755

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 gtgtgatcga gaggtttgag aaggaagccg ctgagatgaa caagaggtct ttcaagtatg 120
 cctgggtgct tgacaagctc aaggctgagc gtgagagggg tatcaccata gatattgctc 180
 tgtggaagtt cgagaccacc aagtactcgt gcactgtcat tgatgctcct ggtcaccgtg 240
 atttcatcaa gaacatgatc actgggacct cccaggctga ttgtgctgtg cttatcattg 300
 actccaccac tgggtggttt gaggtggta tctccaagga tggccagacc cgtgagcatg 360
 ctctccttgc tttcactctt ggtgtgaaac agatgatctg ctgctgtaac aagatggatg 420
 cca 423

<210> 756
 <211> 363
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-018-Q1-E1-D1

 <400> 756

cctataactga gtcgtattac tgtgagactg agaacccgag aaccacaccg gacacacctc 60
 tcagccccag cgaccaaata cggcaccgcg ccgcccgcgc cggaaggaag gaagagagcc 120
 ccgcagcgcg cgatgaacac cgacatcacc gcgtcgggtga agccggagta cccggtggtg 180
 gaccggaacc ccgccttcac caaagtcgtc cccaacttct ccacgctcga ctacctccgc 240
 ctctccacca tctccgccgt ctccgtcacc gtcggctacc tctccgggat taaccggga 300
 ttcgcgcccg tcgatggtga cggggggcct catcggcgtc ttgggaggtt catgtacgcc 360
 tac 363

<210> 757
 <211> 358
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-D10

<400> 757

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 acaagcattg gcacattggc atcaaacagg attctcaaag aagagcaagc ctgtttgcaa 120
 ctacaaggat cttaaggaca tgtatgaaat catgagaagg agggtagtga gtcaaggatt 180
 cctagttctt actggctgac aaactttggt aaaacttctg agagtataaa gttgggtcag 240
 ctattttgga acggagtgag tagtcaagaa tattgtagct aaaagtagca ggcaggagat 300
 aaccaagttt cacattgact taactggtat cgtcgtcttg tagcgataac tttgctgt 358

<210> 758
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-D12

<400> 758

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 gagggagctg tggagcctcc ttctcagtgc gcagcagaat gctagtgggtg tgccccagca 120
 atttttggat gcaaaggagg ctgagattca gcagagaaaag gcggaagagg ctagaattgc 180
 ccaggaaatc cagaagaagc gagagaatag atggaatgga cacggaacta gataaacgca 240

aaatgatggc cggggatact ggtaattcaa gatttcatgg tgattcactt ggctctgcgt 300
 taaacaatcc cagtgtctat gctgataaag aagaggagct ggacttgaag catagctcga 360
 gaacaaagag ccgggaagat cgaacaccta ggagcacatc tttg 404

<210> 759
 <211> 384
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-D5
 <400> 759

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 gccgaagggg caacgatcac agagggcctc tacatcaact ccatggcctc tccggatgatg 120
 tgtgagtagt ttactttaga ccttcgggctc catagttatt agctagatgg cttcttctct 180
 ctctttgaat ctcaatacaa agttctcctt gatcttcttg gagatctatt cgatgtaact 240
 ctttttgccg tgtgtttgtc gagatccgat gaattgtggg tttatgatca agtctatcta 300
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 tctttgaatt accagtttgg tttg 384

<210> 760
 <211> 394
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-D6
 <400> 760

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 aacgtgtgat catgttttgc ttgtgagaga agtttagtca acgggtctgc catattcagg 120
 ctcatctctg ttgagagcag gatccaccgt cttgcccgtt actacaagcg caccaagaag 180
 ctcccgccca cctggaagta cgagtctacc actgccagca ctctggtggc ttaggagggc 240
 tcttcatctg gtgtgctctt accggcttca ggatggtctt gttctacata ttatcaattt 300
 catgtaacgc ttttgagttt ggagcgatct agatgaacac gagaccaaatt tttctagggt 360
 tacctggaga atctcataaa ccatttttgg tttt 394

<210> 761
 <211> 428
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-D9

 <400> 761

ctcccggtc gatggggatc tcgagaatga atcctactag tggaagaaac agaagaagga 60
 gaagctaaag aaacggagca agtacaaacc gtcgaacaag gcatcctcca aaacccaaag 120
 gaaacccac cctaagaaga aagcaaaaca ttaatcaagg tagagctagg gctcggcaaa 180
 ggctgttgac gaagtgctat gctttcagtc atgagaaaca cctgcctgtc acgggaaatt 240
 ttgtttaagt tgagaattac aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
 aaaaaaaaaa aaaaaaaaaa aattaaaaaa aaaaaaaaaa aaaaaaaaaa aaagcggccg 360
 cccaaaagga tccaacctta cttacgcttg aatgcaactt catacccctt caaaagtgtc 420
 acctaaat 428

<210> 762
 <211> 282
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-E10

 <400> 762

attacaacac cctatagtga gtcgtattaa gtatccttga cgacattact gattgtaaac 60
 tgcaaaactc tgactggata tgcacaagct cctcttgagc cattggcgtc tgaaaggagt 120
 cggcacctga taagtctgga gtctcttagc atggaggtct gccaaagttc actagagatg 180
 tacaacgtag cggcaactct caagaatagt acgattgatg ggtgaatgaa gcctgaatcc 240
 acatttgga agatgcatgg catggcacag tgagtcggag tc 282

<210> 763
 <211> 327
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-E12

<400> 763

atagtgagtc gtattatgaa ggctatgttg atttgtttca actacatgcg tgaacatgtg 60
ccaagtcgag tcaactcaatt cattcaaagg aggataccat cccatcatag gacatcataa 120
tcattctaata agcatgttgg cagcgaaggt aaaccattat aactcatagc taatcaagca 180
tggcacaagc aactataatc tctaaatgtc attgcaaata cgtttacttc ataataagcc 240
gaatcagaaa cgatgaactc atcatagtta caaaagcaag agacttcgag ttcataaccag 300
cttttctcat cccaataagt ccatcat 327

<210> 764

<211> 190

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-E4

<400> 764

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acgccctaga tgatctaaac tgacgtatgc gttcaagctg acttcatatc tcgttctaga 120
gtgtcacgag gggtgcaaat catggggcgt ccatttataa cgtcgttact gggaaaagcc 180
tgtcgttacc 190

<210> 765

<211> 338

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-E5

<400> 765

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caaatgcacg ccgtcgatga cgcgggtggc caccgcgccg gggagctcag ccggcagcat 180
cggccggggc caccggctgg tgttcatcgc ggcgaattca aagctgcaga ggagggattt 240
ctcaaacgac gaccacaagg acgtggagct gcttgacaga acgcgacgaa gacatgctac 300
acgagactgg caatgtggat tccccacct cctcagtg 338

<210> 766
 <211> 414
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-E9

 <400> 766

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 ggacagatgg ggaaaagcca cgtcaacctg atgcaaagga gatgcgtgga acaaatccaa 120
 caaaacttca tcacaccaac aaatcacatg acacggattg gggctatddd tggcggggat 180
 tttcggattd aggacgaaca caccacaatc aatctagaaa acacggggta cgggctccat 240
 aaacgtgatc accgtggctc aagataccaa catgatgtag ggcggaaccc taggggccga 300
 tctttcacat ttggaatgga tcttacaggg gaaacacgaa taacgcgcga aaaacacaaa 360
 gggaaacacg gcgagataca gtacgatcac ttgactgacc aggaatcaat caca 414

<210> 767
 <211> 406
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-F12

 <400> 767

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 gaaactttgc acgcatgaat ttagttttgt taaatcacag aaacgtgatt ttgtgttgat 120
 tctttttctt ctgatcaata gacaaattgt ccaggacttc ctatdddgtt aggatdddta 180
 gagttccaga agtttgcgtt agttacagat tgctacagac tgttctgttt ttgacagatt 240
 ctgtttttcg tgtgttggtt gcttattttg atgcatctat ggatagtaaa atagttttata 300
 aaccatagag aagttggaat acagtaggtt taacaccaaa atacataaag aatgagttca 360
 ttacagtacc ttaggtggtg gttttgtttt ctttcactaa cggagc 406

<210> 768
 <211> 202
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-F6

<400> 768

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acactcataa acgcattagt cccttaacct ataagtcttc aatacaccaa aatcactaag 120
gggcactaga tgcacttaaa atctccccct ttttggagat tgatgacaat atgggtaatt 180
tttacagggg agataaacat at 202

<210> 769

<211> 277

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-F9

<400> 769

attacaacac cctatagtga gtcgtattat gggctgatag atcgtgggag tcagaacaac 60
tgcttgattg gaggcgatga tctcaagagt gggcagacta ggataaattc cgtctgggag 120
gagatgcatg tgggcgctgg atgcaagctc aggcgacttg gcagcgctga taacctgggg 180
aagtacgatg ggggtgggtct gtaggcgcat cagctgtcca gtggcggggg tatgtccagc 240
agtgacgtcg cggaggacac ggacgcaagc accggag 277

<210> 770

<211> 369

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-G1

<400> 770

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tggtcatgt ccacatagga ccgcctcttg agtatagact agccaatgct cacaaggatt 120
actccacaaa ataccgttac cgatctatct gatccaggct aacctagtcc tgctatctac 180
ctgactacct cttcgtgaca gtcaccgagt tacacttcac tggacgtcgt ttacattgt 240
cattatcgtg acaaccttgt tgttaccaga ctatccgcac ttcaacacat cgtcatttct 300
caaactaggg attgctctat aatggcagca ccgatcacc ttctcaatag ttcaccagcc 360

tgaattgcc

369

<210> 771
<211> 418
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-G10

<400> 771

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tttagaattt ttggggttcc agatcttgcg ctagatacag attactacag actgttctgt 120
ttttgacaga ttctgttttt cgtgtgttga ttgcttattt tgatgaatct atggctagta 180
atagtatata aaccatagag aagttggaat acagtagttt taacaccaat ataaataaat 240
aattagttca ttacagtacc ttgaagtggc cttttgtttt ctttcgctaa cggagctcac 300
aagattttct actttaagtt ttgtgttggt aagttttcaa gttttgggta aagatttgat 360
ggattatgga acaacgagtg gcaagagcct aaacttgggg atttctcatg ggaccccc 418

<210> 772
<211> 404
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-G12

<400> 772

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ggatatttgct atgggtataa aattggctct agaatgatgg gcatccaagt tgggtataat 120
aaaaactatc atagaaagtg aattggatgc tatgaccaat ttgatacttg ataattgttt 180
tgagatatgg ggatgggtgat attaaagtca tgctagatgg gtgataaaga atttaaataa 240
tacttgtgtt gaagtttgtg attcccgtag catgcacgta tgggtgaaccg ctttgtgatg 300
aagttggagc acaattttat ttactgattg tcttccttat gagtgcaggc cggggacgag 360
cgatgggtatt ttcctaccaa tctatcccc taggagcatg cacg 404

<210> 773
<211> 352

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-G3

 <400> 773

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 gtgccttctt gggagtaccg gatatgtatc cggcttcagc gatatgccat acttcggtct 180
 cgcccacttg acatatggat tctcactggg tgcagggggac aatgcagaat agcttcttcc 240
 atagtccgaa atgagcctcg cagcctagaa atagctcgca aatggcgacg taccctgcta 300
 tatgcagtaa ggacgctggg gtaaagttgt gcaactggag gtcgtagaac tc 352

<210> 774
 <211> 387
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-G6

 <400> 774

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 gccaaagcagt acgccgagga gtatcatgcc caggacaagg agttgggttca gcttaaccgt 120
 gagggccgga tgaagggtgg gttctatgcc agtcctgacg ctacgctgct gtttgttgct 180
 ataatcatag gtatcaatgc catgcagcca tggaccaaga acatcttgca gctgttgctg 240
 ctgacacaga tattcactgg agtggttccc aagggttaaca aggccaccat caacatgctc 300
 tgcagggctg agccatatgt tgcatatggg taccggaacc tgaaaagtct gagggagctg 360
 atgtacaaga gaggttacgg aaagctc 387

<210> 775
 <211> 379
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-G7

 <400> 775

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catggattat acgcactctc acccttccac ctttgctagc ctctctaaat atcgcgccacc 180
tttcgccggt atcatacacc taccatatat ctctctcaaa gcagcgagca taccaaccta 240
ttacggcatt tccatagcca ttctgagata tattgccatg caactttcca ccatctagtt 300
catcatgaca cattcatcat tgtcatattg cgtagcatga tgatgtagtt gagatagtat 360
ttgtggcaaa gccactgct 379

<210> 776
<211> 438
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-H11

<400> 776
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caaattcaaa actactcaac tagcatgact ctaatatcac catcttcata tctcaaaaca 120
attatcaagc atcatacttc tcatagtatt caacacactc ataagataat ttttactaat 180
cttggaatgcc tattataatt aaagaaaatt accacactgt tttgtaggac tctcaaaata 240
atataagtga agcatgagag aacaatagtt tctataaaac aaatccacca ccgtgctcta 300
aaagatataa gtgaagcact agagcaaaaa ctatatagct caaaagatat aagcgaagca 360
catagagtat tctaataaat tctgaatcat gcgtgtctct ctcaaaaggt gtgtacaaca 420
aggatgattg tggcaaac 438

<210> 777
<211> 231
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-H3

<400> 777
gggtccacgg gggccccaaa attcagtcgt atgaatgatg atgatgacga cgacgatgat 60
gatgaatctt gtatgcatat tgcagattcc atgtcttcat gcatgttgct tcacgcgcac 120
tggataattt cgcaggtcta gaggatcggg atttacgtat gcgtacatgt aacgtcatat 180

ctctgctata tggtcaccta gattcaattc actgtgcgctc actgaatacc a 231

<210> 778
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-H6

<400> 778

ctcccgggtc gacggggccac gctaacatca gtcgcggcag gacttcaatt gatggattga 60
 ccacttcttc gacatgcacg aacactcgat acaggtacat ccctaacgtg gtccgcggcg 120
 gccttggtgg cgacaaatag tacaaccccg gttcctggac cggtatctca acaccaatca 180
 ccttcggtat ggttgacggc ttcttcatcc atgccataac cgtcagagcc cagctgtctg 240
 gaggaacaaa catacttacg agctcacatc caaggtcctt gataagctca ttcattggact 300
 cggtgttcca agcatgtcga ggcattgctgt ggaaggtaag ctttggttaa aactcaagct 360
 cagagggcac cgagcccat cctgggtgct cactagcgag ccatcgtaga acaaacgccg 420
 ggaagattcg aacaca 436

<210> 779
 <211> 194
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-H7

<400> 779

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 gacatgctcc tacactcaaa gcaagtacat ccctagtgtg ggccgcagat gacgtggagg 120
 tctggcttat tacaggactt gttcctgttt cggtagtcga atgcaaatca ccttcgttaa 180
 gggatgacgg gatc 194

<210> 780
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-018-Q1-E1-H8

<400> 780

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ttcattttaa ttcgagaata atgggtgttc tatttatacg agtaacatat tttatggtca 120
tggaccaat gtcaatgggt taccattgtg tgtgtgctgt tgtctaggag cacctgtgaa 180
gagccatgta ggcaggggaag gaagaggtgg tcatcggtg gcttcacacg tctggcatga 240
gcgccttacg tacacacgtg aggaggatcg tgacagaggg cctgcagtgg tgggctctgc 300
cagctttgtg tgggtctgcac atgttngtgg ccatgtaagt gacccatgta agcgttctct 360
ctctcttttc taaactcgct cagttttcta atttctgtaa ttgtg 405

<210> 781

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-H9

<400> 781

cccggtcga cgggtcactc caaaacatga agttcttaat tttaagcaaa gggagggaga 60
aaatttaaaa gatgcttggc atagaatttg caatgctcaa aatagatcta ctaggaagct 120
ttctacttct gttcttctcc gcagttttta tgtaggcatc actccttga atagatgtgt 180
tcttgatact gttgccggag gtgatttctt gagtagccat gcgtttgatg cttataatgc 240
tatgttagat ttgtttggcc caccacctct tttggttaat ggaacggttt taactttaga 300
acatgtgatg caacggcttg atattattga aaataaaatg gccactattg agttgattga 360
caatttggat aaaaagattc ataatacat tacccaatat ggatctaggg ttggagttac 420
tttgaaaaat cttaaa 436

<210> 782

<211> 449

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-019-Q1-E1-A10

<400> 782

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 ggccttcacc ggaacaactt ggtgacttca cccgataaaa aggcgcggaa aaccctaag 120
 ccttaacgga caaggtaatg gaccacaatt tccaaaaagg gttaaaaacc gtgacaattg 180
 aatcatacaa tggaacgaca gatcccacaa tatggatcaa aaattccctt ctccacatca 240
 acatgggtca gggcgatgat ctccatgcaa tcaagtacct cccctaataa ctcaaggac 300
 cagcacggca ctggttaaac agcctcccag aaaactctat tggtagttgg gaagatttgg 360
 gagatgcctt tggagacaac ttccaaggta cctatgttcg gcctccagac gccgatgacc 420
 ttagtcacat agtccaaaaa cccgaagag 449

<210> 783
 <211> 314
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-A2
 <400> 783

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 aagcgaagac caaggccagg gaaaggctta tcgcaaagga ggctgcgcag cggatgaact 120
 aagtttagca ttgttgaacc atatctattc ctcatccttg agtagtgtgc aagcatactg 180
 tggcagtttg gctccagttt tgaaagtcac ttttgtttgt ctgaaacatc ttggaaagaa 240
 cagtgtgaaga atgaagtatt tctgtttaat gccagttagt attttaaaaa aaaaaaaaaa 300
 aaaataaaaa ataa 314

<210> 784
 <211> 436
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-019-Q1-E1-A4
 <400> 784

ggtcaagaat tcacgggtcg acgggagttc cagagagagg tgcgcgccat caggcggacg 60
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gtgtacgagt tcatgagcaa cggctcgggtg gccgacctgc tcttcagggg tgcctcaacg 180
 ccttcgtggt ccgactgcct tggcatcgca ctcgacgtgg cccggggccg gcactacctc 240
 cacgacgagc ttagcagccg cgtgaccac tgtgacgtca agccgcagaa catcctcata 300
 gacgcagccg gcacggccaa gatcgccgac ttcaggcttg ccaaactgct ccaaccta 360
 cagacacgca cttttcacgg tgtccgccgc acgcgtgggt acctgggccc cgagtggtag 420
 aggggcacgg gccctg 436

<210> 785
 <211> 420
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-A6

<400> 785

aacggtctag aattccccgg cgcacgggcc gcaaagtgga gtcctctctg ccgttacgcg 60
 cgccgccgga ggagaagaag gaagaggaaa agaaggagga accagagccg ccgaaacctg 120
 aagagaataa ggagccaacg gtgatctccg tgggtctgaa ggtgcacatg cactgcgagg 180
 cctgcgcccc ggcgataaag aagaggatcg aaaagatgaa aggagtgcaa tctgcagacc 240
 cagacctgaa ggcgtcggaa gtgacgggtga agggcgtgtt tgaggaggtc aagctggccg 300
 agtacgtgca caagcgcacc ggcaggcatg cggccattat caagtccgag ccggtcgccc 360
 cggccgagaa agccggcgaa ggcgacgcca aggatgagaa gaaggcagcc gaaggcggcg 420

<210> 786
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-A8

<400> 786

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 gggcaagagg ggttcggggg taaaaagcac agagccgtgc ctggcccgtt taaccaggc 120
 cgtgccgtgc cgtgccgggc cgggccggcc catttgacca ggtttgattg tgtatccgcc 180
 tcgcattttc tgatttttac caatttatta atagtagcaa aaatgcccggt gcgtggaagt 240

attggacata tagtttattg catggttact tatatttgta tcatgatatt tatttattta 300
 actaacacat catgtttttc aatttgtctt caaatcaccg gtgagattta catatgtatc 360
 cactaatgca tcatgtgttt catcagttta tcttgtctgc atgacaccct cattcaac 418

<210> 787
 <211> 387
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-A9
 <400> 787

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 aaaacggacc ttaaccgtgt tgcgggggtg tcataaggag cctatccatc tcaactagaa 120
 ttatcccaag tttcacttca catcgtgatg ttgttttacc tttttcctgt cattgtcctg 180
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 ggtgtaagtc ctcttccgcy ggggtgccct gcttgtacct agatggttac tctttccgtc 300
 cattgtcacc ggctaacatt gtgataatat caatctgggt aatgttagat taagctgttg 360
 tcctacaaaa aaaaaaaaaa aggggcc 387

<210> 788
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-019-Q1-E1-B10
 <400> 788

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 caagggatac ctgatcaaaa attgaatctc tttcggtaaa agtaatctat taggcaccgg 120
 aaaccctgtt gttggtttgc ccgtcaacaa gcaactgtgga aggctcgaag gcaaagggtca 180
 caccaatggt catagggatg tgaatgtgtt acgctcgggc caacaaaacg accttgatan 240
 ggcaaactta gtagtgctac aacacctaga tgtgctagaa gatttcatga cactgcacaa 300
 agagaccatc gcaaagaagt accgtgaccg tgggggtgcac aggacggacg cttaagttat 360
 tagagagcac aactccactt tcttgttttg gttcaaagag cgagttcttg ctaatcccc 420

ggaagaaggt tgtccaaa

438

<210> 789

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-B2

<400> 789

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ttatagaaac tatttttctc tcataattca cttatatcat tttgagagtc ccacaaaaca 180
acatggtaat tttcttaagt tgtgaaatta gtcctaatat gataggcatc caagattagt 240
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tgagatatga agatgggat attagagaaa tgctagtga gtagttgtga atttgagaaa 360
tacttgttct aaagtttgtg attcccgtag catgcacgta tggagaaccg ttatgtgatg 420
aagtcggagc atgat 435

<210> 790

<211> 424

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-B6

<400> 790

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gagtaatgag agtgatgcct tggataagct gagatttctc agtgtaactg atccatccgt 180
gctggctgat ggtggtgaca tggaaataag gattaaacct gaccctgatg ctggcacaat 240
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tatcgacaaa agtggtagct ccaaattttt gaaggctctg aaggagaaca aggagcttgg 360
tgcagataat ggacttattg gtcaatttgg tgttggattt tattcggctt ttcttgttgc 420
agag 424

<210> 791
 <211> 363
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-B7

<400> 791

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tggtcgaggc cttgatcatg gtgatatgtg tttattcgtc cgggtggctca gtagaacgat   120
aacctctgtg cacagtgatg tttcagtttc tacattgatg gtttcaagca taagaagggt   180
tcaaaattaa atgagccttg tacaggactg ataacaaatt atgctttctg agtttcaagc   240
tactgaaagt aattgaagct ttgccttcgc tatgtaagaa tgggtgcatg tgttaattag   300
tggtgcacat tttttgagac tgtccaaaat tctattataa aatgcttata tgaaattgat   360
ggg                                                                 363
  
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<210> 792
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-B8

<400> 792

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actgtcgagc aattgataga attgagcata gttatgagaa tatctaggta tgatcatgta   180
tataggcatc acgtccgtga caagtagacc gactcctgcc tgcacttact actattactg   240
cacacatcga ccgctatcca gcatgcatct agagtattaa gttcataaga acggagtaac   300
gctttaagca agatgacatg atgtagaggg ataaactcat gcaatatgat ataaacccca   360
tctttttatc ctcgatggca acaatacaat acgtgtcgtt tcccctgctg tcaactggat   420
cgagcaccac aagattgaac                                                                 440
  
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<210> 793
 <211> 440

<212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-019-Q1-E1-C10

 <400> 793

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 ccaccaccaa accattttta accagaatga ccaaaacacc tggaaccagg ggtcaaatgc 120
 ccctccggca aaaacttgca catgaggaca accttaattc acttcttcaa gttgataaaa 180
 tgggtccaatc taatggcgca gcacacagct cacatatgaa ggaagagcct cgaagctaata 240
 gcgtggcatg caccgaaatt gttaaggcca gatagatggc ttcagctatt ttccttcggt 300
 tccatagcgg tgctgctagg aatccctaca tgatgttata ctgatggagc gccatgaaca 360
 gttgccgtac atccttgaga tcattttcta cccttccagc tgaagctcgg gaaagcgtgt 420
 ttggaaggaa cagattctgc 440

<210> 794
 <211> 411
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-019-Q1-E1-C2

 <400> 794

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 agtgtcaact taatcaaata aagtccacga tataaagaaa gagggataac actaacaacg 120
 ggtccaagat tacataaagc aattttaaca aaatttcctt taatggagca agggaaaatg 180
 ggtaatcctc gaaaaccaag tttccttggg aatccaaccc taaaagttaa atagcagcat 240
 ggggaaacca actcgggaac ttctttaata tacaatacct tcaaaaacta ggcataagga 300
 tttattttga gcatatcaag ttaaccgcat acgcaaaaag ataggtcaaa tcatttaagc 360
 aaagcgtca aaatcctcat catccttttt cttggatggt ttggggggga a 411

<210> 795
 <211> 421
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-C3

<400> 795

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tgtccaatca agaatttcca tgcaagagac aaagagttca cctatcgccc aggcggtacc 120
tattatgctt gtggagaaga agggcactat gccaaagcagt gcccgaagcc aaggaactca 180
accccgaaagc ccaataatgg tggaaataat tcagcgccaa agcgaagcaa tttcaacccc 240
aataacaacc atcggaagg tcaactgaac catgtgaccc atgaggaagc acagaacgcc 300
ctagatatcg tgctcggtac gtaccccgtc aacacaatac ctgccatggt tttgtttgat 360
tctggagctt ctcaactcatt catttcgaag agttttgctt tgcaaaataa tttttcgatg 420
c 421

<210> 796

<211> 55

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-C4

<400> 796

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<210> 797

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-C5

<400> 797

tacggtcagg aattcccggg tcgacgggca cctctgaaa ggaacccttt ggccatggag 60
catcagcaat tttacttatt agagcacctc cgcacgctgc gtactgcccc tcgaccatct 120
tcggcttcac atcgaaggtc ttgagccaca ggccgaagtg aggggtaatg cggaggaagg 180
cctcaciaaac gacaataaat gacgagatgt gaagaaggga atccggggcc agatcgtgaa 240
aatccagcct gtaatagaac ataagacccc taacaaaggg atccagagcg aggcctagtc 300
ctcggaggaa gtgggagacg aacacaatgc tctcgttggg ttcaggagta gggacgacct 360

ccctcgggc ggcagccta tgcgaaattt cggcggtcag atatctggcc tccctcaact 420
tcttgatg 428

<210> 798
<211> 439
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-C6

<400> 798

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ccacctcgcc ggagccgctc cttgcttccc ggtgatgccg cctcctcgcc ctgccactga 120
agtgcgaggg cgccaccgga ttcaatgggg tgtgccgacg gccgtcagac aactacggcg 180
tcgagtttga acacaccggt attggctcga cacatactcg tcagcctacc tcatgacatc 240
gctgtgtgga ggctcagcct ccccgccccg aaactcaatt cctgcaaatt tgagtctggt 300
gaatgcgagg ctcgtcagcc cgccggtgac aattgaatct agcccaattt gggcagctcc 360
tcacattgtt gtcgatgagt gggaaaacat tcgagagagc gataaggatg ccatggcagc 420
gttcactaag gcacatcgg 439

<210> 799
<211> 448
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-C8

<400> 799

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ggccgagaag cggctgccg cgggcaagac ggcgtccaag gaggcgggag gcgagggcaa 120
gacccggggc cgcaagaagg gcagcaaggc gaagaagggc gtggagacgt acaagatcta 180
catcttcaag gtgctgaagc aggtgcaccc tgacatcggc atctcctcca aggccatgtc 240
catcatgaac tccttcatca acgacatctt cgagaagctc gccggggagt ccgccaagct 300
ggcccgttac aacaagaagc ccaccatcac ctcccgggag atccagacct ccgtccgctt 360
cgtcctcccc ggggagctcg ccaagcacgc cgtctccgag ggcaccaagg ccgtcaccaa 420

gttcacctcc tcctagactg acgatgcg

448

<210> 800

<211> 440

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-C9

<400> 800

accgggcaag aattcccgga tcgacgacga cgcgcatacg gtgacttcgt aaatctcaag 60

atgatatgtc ggctcattct ctcaaagggtg cccatagggg taggggtgtgc gtgtgtgcgt 120

tcatagggat gattgtatgc gcgtgtatat aagcgcttgt gtctgtattg atgctcaaaa 180

aaaaaaagtt aaccatcatg atttacattg caatttcttt taaagttatg ctaaagtgtc 240

cccacctgtc gaactaatgt aggagcaatc gtgaaataga tactactctc tccatttcca 300

aatatgtgtc tttctagaga tttcaacaaa tgactacata cgaagcaaaa tgagtgaatt 360

tacactctat atacatccgt atgttgaaat ccatttaaaa tataaaagac aaatatttag 420

gaataaaggg aattccaaaa 440

<210> 801

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-D1

<400> 801

attcacgggt cgacgggata ataatggtgc ggatggtgtt gttcccgaga gtggtcctgt 60

cgaagatgag gagcatattg cttctctgag gcctaaaaga tcaaagagac tagtgaggag 120

cacgggtgag gataaggaac ccgttgctgc ttgtgatgtt gagaaacctg cagatgcagc 180

tgaaaacaat gacaacaatg atgcagaaga gttgcaatcc cagactcctt cagcctagtt 240

gacctactgg gttgacctga tgaaaacata agatgcgaat ggcaagactc taatttgtgg 300

tgttgagtag gagcatcaaa gatggcacc attggaggag ctctggatct gcttaagggtg 360

ttacgcagtt caataagtat tttactgtg ctgtgcagct tcttttc 407

<210> 802

<211> 439
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-019-Q1-E1-D12

 <400> 802

 gtacggtcta gaattcccg gccgacgggg cacataaatc tgttcaagca cagaagtaat 60
 cttcttttagt catgaaaaga attgttatta ggagggaaca caacagatga aatagagcta 120
 gtggcagatg cttgcataca tcagatccaa tgcttttact acataaaaca atcccttgaa 180
 ttaatagtgg caaaatgcaa tggataaaaa caatgggtaa gccctttctc ttttgtagt 240
 attggttcta ctctccttg ctactttgaa gtactgataa ttctcctcct tgggcatgtc 300
 atttcccaga ggggttaaaat gggcactctt aatttctctt tcggaggaag cggagaagct 360
 gtagatgacg ctaaggcaca gaggaagagc aagaactgca acacctgtgg atgttgtcaa 420
 cgtttctcat tgtaattga 439

<210> 803
 <211> 419
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-019-Q1-E1-D3

 <400> 803

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 gagcagatgg cgccgtggtg gagggcaggt accaccacaa cctggacctc ttcacgatgt 120
 ccaaggacgt cgccgccaca aagatgccgt gcgctgaca cggcctaacc cgaccaacct 180
 ctgggggaag aaagacacca ctgccacggt tcaactgtcag ccttcagccg cgggtgctctt 240
 gggcacattc tccggtggtg cttangagtc tgcaccggtt actgtaccca tatgagctta 300
 tgttggtggt tgtgactgtt agaggatctc atgcttggtt atatatagga atcctggttt 360
 gtcgaaactc gaataatgaa aagttgaaat tgcattctga atttgcgcaa gaatataat 419

<210> 804
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-D4

<400> 804

ggccaagaat tcacgggtcg acggcgaggg cagatgaaaa tgtgctgaag cttgtggcaa 60
aacacaagag ggagaaaaag gctgctctag atgagattat caagttagag cagaaactgg 120
atgccaaaca gaagcttgag ctgaaataa aacagttgca gggaaaattg gaagtgatga 180
agcatatgcc aggtgaagaa gactctgaat caaagaggaa aatagatgaa cttagtgccg 240
agctccagga caagtatgat gaaatggatg cagtgggaagc actccaccac actctgctta 300
tgaaggaaag gataagcaac gatgagttgc aagatgctcg gaagaagcta atagatggtc 360
tgcgggatgt tacaactgcc cgagcaacta taggcgttaa aagaatgggt gaccttgatc 420
tgaaatcg 428

<210> 805

<211> 305

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-D5

<400> 805

acgccgccag gtaacgggtca ggaattcccg ggtcgacggg aactggtggt tccagtgtct 60
aacgggtgac taacacgtac aagtctgccc ttggaagggg aacatcaact ggaaccagtt 120
gcggtatccc cgtatgctgg ggatgttcaa aacatgacca atagctttga tgtccggact 180
ctctagacga tccaagcata tctacccatg cattccagct catcgatcct ctataatggc 240
acaaaattc ttatcagtggt tcgtagtatc aaaaggtcat tctgggtcat ggccctcgagt 300
tacct 305

<210> 806

<211> 437

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-D6

<400> 806

gtaccgggtca ggaattcccg ggccgacggg agtggtacca cgatgccgaa aactttatgt 60

gatattctag gtttccatga tcttgatgat tgctctttaa atttgcacct tgcggattcc 120
atcattaata agccaatggg aaggatcaat tatgtttctca ttgttgcaaa tagaaatttg 180
gtgcccgtag attttatcgt tcttgatata gattgcaatc tttcttgccc tattattctt 240
ggtagacctt tccttagaat gataagtgcg attattgata tgaaggaagg gaatattaga 300
ttccaatttc cattaaggaa atgcatggag aactttccaa gaaagaaaat taaattgcct 360
tattaatcta tcatgcaagc tacttatgaa ttgggtgccca aagatggcac tacttagatc 420
tatecttgct tttatgc 437

<210> 807
<211> 356
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-D7

<400> 807

tacggtcagg aattccccggg tcgacgggag gttgcatcgg tgaaaatttc cagtttttcc 60
tagattagat ttatttttctt acctattgtc caagaaaaag ccacaaaaca aaagttagat 120
ttaatcaacc tttggcctaa ccagactgaa cctttggaat tttcctttca atggttggaa 180
taatgaatta acggttgcac caacgtgtcc aattgctggg cctaattgtc aattccttta 240
aagtttcgag ttctgttcac aataatcacg caaccgctgg atcaatatcc caaccgctgt 300
gtaacatccc atacaacaat ttccaccaag tgctaagcac tgtttaatgt cacaat 356

<210> 808
<211> 443
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-D8

<400> 808

gtaccggtca ggaattcccc ggccgacggg gtcataattc agggcccaat gcatggtagt 60
agctgtatct taaatcacac atacagatct cagtgcctaa gatcggcttc aatgaaacaa 120
cccaccatgt actcctacat ggctctcat cgataccttt accaaaccgt gttcaccaca 180
ctactctcat taccgacata atcatttcac tctagccatc acccagatga accagacctg 240

acacgactct aagcatagca ggcatagcaa ggtaggaaca acacatacat atgggtcaat 300
 caactcctac acatgctagt gggtttcatc tagttactgt ggcaatgaca ggtcatgcag 360
 aggaaatggg ttcaactacc gtagcacaca gcagtttgaa acgcgttgtc ttaatgcagt 420
 aaaagagagc aggagcgaga aca 443

<210> 809
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-E1
 <400> 809

attcacgggt cgacgggtcc tcatccgggg aggtggacga gggacatcga gctgttgcgg 60
 tggacggcgt cgtcggggaa gaggtccgg ttgggcagcg tgacgtggcg gacggaggag 120
 ggtggggttt tgcggctgga gcggagaggt tatggcggcc tgggatttcg aatggcaaaa 180
 agggggcgat gggagggggg gaagcatgac ttagggacgc gcttgtccaa aatgtagggg 240
 gtgttataaaa agtaccccc accaatttga actagcagcc cttttggctc agggtcagaa 300
 gggggatttc gcgtgtcggg atttggcagc tggagggagt tttcgtgcgc gttgtaattt 360
 cgggatagca aggcacgggt tgtgaaggcg ccagttttgg gagcacgata tctgaatttt 420
 c 421

<210> 810
 <211> 427
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-E10
 <400> 810

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 ggccgattga tacgaataga attttggagg ttcctatggc accatcaaga attgaagatt 120
 ttgttgcagt gaaccacact aagagcggga tgtttagtgt tcgctcagct tatcatgcgg 180
 aatggagcta tcgatttggg aggcacgaaa gaaacttact tggcgtcgag gggtcacata 240
 tcatcccggt tgtggaagaa gcggtggagc ttatttgggt ggtgagcact atatggaata 300

ttgccgaggg gtgtcgggtgt accaaacatt atttgtaccg aaattaatct taactgttgc 360
atggtacatt tgggtgggaga gacggcaaac ggcaaaccgt tcacaatgga ccagtataga 420
cgcctca 427

<210> 811
<211> 407
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-019-Q1-E1-E11

<400> 811

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tagtttttgc ccaataactc aattaaaacc tttaaaaaaa cgggggggggt ttaatttaaa 120
aaaattaatt gaaaccagg ctcaactaaa ataatttggg aatcccttaa aaacacaatg 180
gaaatttgct ttagggcata ataaaaactt catataagtg aattggatac tatgagaagt 240
ttgatacttg ataattgctt tgagaagaga tggatgatatt agagtcatgc tagttgagta 300
gttgtgaatt tgagaaatac ttgtcttgaa gtttgtgatt cccgtagcat gcacgtatgg 360
tgaaccgtta tgtgatgaag tccgagcata ttatatttat tgattgt 407

<210> 812
<211> 443
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-E12

<400> 812

accggtctag aattcccag tgcacgggtg ccttcattga agattgaggt gttgtgcatg 60
ctggggtgca gagaagcaca agtgagagtg gtcgccatat aaccttggat ggggatgaat 120
tatgtgctca ggggaggtgg tgtgtgttgt gtgtgtgtgt cagatattga gagaaaacaa 180
acctaaggag agaaatgtgt gtgtatgtga cgaaagcta catgctaaac agggatttca 240
cgaagagatt gtgcgtgcca gatagagagc gatgtgcggg ccttgaggtg ggcagggggc 300
aggtgaggggt gtcaaaatgt gcatgttgat gcatgtgtta catgcatcg tgcgagggac 360

agacaaatcg agagagatgg ttgttggtggt acggatgctc ctctctctct cacacacaca 420
cacacaagta aaatagaaga ccg 443

<210> 813
<211> 432
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-E2

<400> 813

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ttagcgattg ctaaggcgcg acgtcctcgc acgttcgtag tcggatcgtg aaagtctact 120
ctttcgaaac gataatcgcc atctcatcga aagacgggac acctttgcct ctatcaagtg 180
gtatcagatt tccaggttgc ttggtgagat ttacaactt ttcgtagttt agatcgagtc 240
tggtcttcat acctatagtc cagcaaaaag ccaaaaaatt agggttagtt catcctatcc 300
gaaccaatct gagcctttgc ataatctttt ctgtatttgc tttgttgaat ttgcggttgc 360
atcgtcgtgt caagttgctg gtcttagcgt ctagtccttt agagtttcga gttctgttca 420
caggttgtca cg 432

<210> 814
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-E4

<400> 814

aattcagcgg tcgacggcaa ctagtatgca tcacaccctg atgatctctt atgtatatct 60
tatcatgtta cttctgtaat caaacatcta agatgcgctg ttgagcgcat tatcagctaa 120
taaagggcgt ctgccatcat tgtataaaaa aaaaaaaaaa aaaaaaaaaa aaaaaacaaa 180
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
aaaaaaaaaa aaaggggccc cccaaagtgt ttaaacttta atttccggta aaagaaaatt 360
aaaacccttt caaaagggcc cccaaattta atttaaaggg gcctttttta aaaacctttt 420

agggggaaaa

430

<210> 815
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-E5

<400> 815

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cgctggggac cgtcaagtcg cgagttctta cctcgaaggc gtcattctgg caaaccaaga 120
taaggataac ttctcgtgc cttactttcc cgagtaagtc ctccccctcaa ccagcccgtta 180
acatatgaat tcttacatth cgatecgtttt tttaacattc cgtgttttct gcagtgcacac 240
acgttgcacg ctcatcctcc taagcccca aatattctatg gccacgtatt ttgaccggga 300
ccgtcggtcg aacgtagact acgcaaagt caagaagggt cttgatgatg ttctccccgg 360
ctacgcca a tctggaggca ccttcaccag gcctattcgt aagtagcaca agcacg 416

<210> 816
<211> 453
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-E6

<400> 816

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aaggtgctca agcagggtgca cccggacatc ggcatctcct ccaaggccat gtccatcatg 120
aactccttca tcaacgacat cttcgagaag ctgcgggagc aggcggccaa gctggccagg 180
tacaacaaga agcccaccat caggtccagg gaaatccaga cctccgtccg cctcgtcctc 240
cccgccgagc tcgccaagca cgccgtctcc gagggcacca aggcgcgtac caagttcacc 300
agcaactagg gttccgtcgc ggtgtctcta ggggtccgtc cccgtgttct cttctagtag 360
cttttgtgtc gccgtcggtc gtgccatgt gtatcgttat aggtaggtag cgcgcctgct 420
ttgtaaatcg tgtcaggttg tgatggacgg ctt 453

<210> 817

<211> 381
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-019-Q1-E1-E7

 <400> 817

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 acgacgacga tgctgccgaa ccgccgggac atgatctgag tctgtgcgga tcggactgcc 180
 ccttgctaga taatgtacgt acgtacgggt accattaacc aagcatgtcg tgattgcatt 240
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 cccctcctcc ttgctcttga ttgtattata tgtgcgagca tcgttctatg acagttcttt 360
 gatatactca cttgttgaac c 381

<210> 818
 <211> 442
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-019-Q1-E1-E8

 <400> 818

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 cgcattgttc gccacccggc ggatgaagct gctgcagcgc gtggcctact tcaacgtggg 120
 catgtacccg ttcacctcca tgttcctcat cgtctactgc gtgctccccg ccgtctccct 180
 cttcaccggc aagttcatcg tgcagcacct gagcgccacg ttctctgtct tctgtctcat 240
 catcaccatc acgctgtgcc tgctggcgct gctggagatc aagtgggtccg ggatcacgct 300
 gcacgagtgg tggcgcaacg agcagttctg ggtgatcggg ggcaccagcg cgcacccggc 360
 ggcagtgtcg cagggcctcc tcaaggtgat cgccggcggtg gacatctcct tcacgtcac 420
 gtctaagccc ggcggcgcggtg ac 442

<210> 819
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-019-Q1-E1-E9

<400> 819

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agccttactg aaaattcaaa cctaactaac tttaactaat tttccttaaa caaaattgca 120
aatataaatt acccaatata tatatcattt cattcatctt cgagaggcaa ctataaatat 180
ggggaaagag tgtacaaaga aagaccgtcg tatgacctgc aacaatttca accatccttt 240
gggtgtggagg aatatcatag gaactctaca tgatatgatt tttataggat ttttttttct 300
ttagagcgaa ttggttcgta ggaatagatt catatactcc atatttcaaa ggaaaataaa 360
catgatacat ttttatagct ttagagccca ttagaaaata aacatgaatg gattcccata 420
ctcccac 427

<210> 820
<211> 375
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-F1

<400> 820

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cagagggacg aagtggagta caagaggag cgccatgtga ttgtccgcaa ggcttgagct 120
gaaccgaaat gatggaacta ccatggaaac cctctggcca tctgatgtgt gtgtataagt 180
agtgtgaca ctgcagcctg tttcctgagg aaatttggtg cgtcgttgaa attgagttgt 240
agttgtacta ctttaagctg tagctgtagc cctaaattat cttgtgtcga actgaagatg 300
taccacagta agttcattca tgattgcaac atttgggcgt tctgcagctg agcagagtta 360
atgcctaaga aaccg 375

<210> 821
<211> 430
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-019-Q1-E1-F10

<400> 821

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caatcgtcag cgtcggtagc ctcaacacaa ccgctgaacg tctttggggc attagcaagg 120
aactggttca gagtagcaaa gtggtgctga ttgttgccctt gattcccttg actgccttga 180
ttgcgctctt gaaggatttg catgatcaac tgtgtgtttg cattagtagc ggccatcaca 240
gcttgccatg cttccggagg aggcggaggt ggaggcggat taggattcgg agtcgtgcgc 300
gttgaggag ccactctgaa caggttgacc accattagca catagataga caacaatata 360
gaagctgaat ccaacggaat gaaaattgca acatatagtc ttcacatccg aacaagatga 420
acgaatgcat 430

<210> 822

<211> 411

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-019-Q1-E1-F11

<400> 822

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attggctgaa ccccggtggc caaatttcca ccaggaaacc ttgcttcaac aattctggga 120
attccaaaag gaaattgaac ccaacgcact accggaagcc aaggttctac accaaggtgt 180
ttaaggaatg ccactcctat gaccaagagg ggaattcctt tgagctttct ctggttaactt 240
ccaagtgcac tggagcttat gtgaaaagca agaagaacca gaaccagata tgttggtgt 300
gggagaaggt caagtgcaca gaagacaaag gctttcagag attcctggac aatgtgcagt 360
acaaatccac tggaatcttg cgttatgagc gcgtgtttgg ggaaggttat g 411

<210> 823

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-F12

<400> 823

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 ttcaaagcac aaagagttct tgacgagatt cgctggcggtt actacgagga aactgttatg 180
 atactgaacc tcatgcccta tcgagcatct tatcccatct taaagttggt ttattcggca 240
 gccgcaaatg ctactcatta tagggatttc gacaaagcga atttatttat tactaaagcc 300
 gaagtcagta ggagtactat tatgaagaaa ttcagacctc gagctcgagg acgtagtttc 360
 cccataaaaa aaagcatgtg tcatataaca attgtactaa atatagtaaa gaaatcttaa 420
 gatttcgat 429

<210> 824
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-F2

<400> 824

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 gattttttgca ataagtatat gtgttcttta tgactaatgt tgagtccatg gattatacgc 120
 actctcacc ttccaccttt gctagcctct ctaataccgc gcagctttcg ccggtatcat 180
 acaccaccca tataccttcc ccaaaacagc caccatacct acctattatg gcatttccat 240
 agccattctg agatatattg ccatgcaact ttccaccgtt ccatttatta tgacacactc 300
 catcattgtc atattgctta gcatgatcat gtagttgaca tcgtatttgt ggcaaagcca 360
 ccactcataa ttctttcata catgccactc atgagtcatt gcttatcccg gtacaccgcc 420
 ggaggcactc atat 434

<210> 825
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-019-Q1-E1-F3

<400> 825

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cgataatgat attgcggtga ttgatanatc ctttggattt gacactgctg tggaggaggc 120
tcagagagct atcaacgctg ctcatgttaa acctgaaagt gcaaaaaatg gcattggggtt 180
gtgaagcaaa gggggccgcaa cagtgggttc atcgcaatgt atgctactct agctagtcgt 240
gacgtggatt gttgcttaat cccagagtct ccattctacc ttgaagggaa aggaggcctc 300
cttgagttcg tcgagagacg gctcaaggac agtggtcata tggtcattgt ggtggccgag 360
ggtgctggcc aagatctcat cgcccaaagc atgaactttg tggacactca agatg 415

<210> 826
<211> 413
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-F4

<400> 826

attcacgggt cgacgggcta gtggattctt gggagcattg tacctccaca cgctccaaac 60
ggagattagc acccgcaagg atgtgaactt cgggatacat cgttctctcg cgtgcctcgg 120
ttatctctta cccgaccctt ttacttatgc actttacttt atgatagcca tagtgtttca 180
tgttgtatat cttgcttagt ataagttgtt ggtgcacata ggtgaggcta gttgttttag 240
gttttctgct tgagaaatta aacgctaatt ctattccgca tttgttcaac cctaaaccat 300
aattatttta aagcgcttat tcacccccct ctaggcgaca tccacgatct ttcaccagc 360
tttctccaaa ctcccttgcc ctattgaaga ggaataacat atgtttcata cct 413

<210> 827
<211> 410
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-019-Q1-E1-F5

<400> 827

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aagaagttha aaatatgtaa tgtagtaccg catggatagt agcccctaat gccagttcg 120
gtgttcggaa agaaaaagcc ggactgagga tctaaaaaga tatacgcagg agttctaaaa 180
atatgtcaat atcggtattgc aggctgcgct gctgacctct gccgcattga ctgcgaaggt 240

cgggtgctttg aagcaagacc tcgagcggac cgagaacgag ctcggccttg ccaagaagca 300
 gctcgaggac aaagaaggtg ggtaacaccg taataaattt gtaccttaca gaaaaggatt 360
 ttggttgcaa tagaaataac aagcataact tgggcactgc anggggcacg 410

<210> 828
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-F7
 <400> 828

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 tcttcagcat tttcttcagg tgcattagct cgacgttctt cacgttctgg aatgaattct 120
 tcagcagatt cttcggtagg aatgacatcc tcagtagcct tgaacttgat agtttctca 180
 ggtgctggtt catctatcac agaaggtagg tgctttcttt gcgagccatt agtttcatcg 240
 aatcgcacat ctacagtttc aacaaccttg tgaagaacgt tgttgaagac tctgtaggtg 300
 tgcgagtcct ttccgtaacc aagcataaaa cttcatgtg ctttcagtgc aaattttgag 360
 ttgtgatgag gatctctaatt ccagcattta gcactgaaga ctttaaaata actcacattg 420
 ggtttcttgt cagtgagg 438

<210> 829
 <211> 437
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-F8
 <400> 829

ggtcaggaat tccccgggccc acgggcgatg caggtaggaa agtggacgtc atggatgatg 60
 atgacctgat tgagagggag ctggaacatg gcgtggagtt ggctgccgag gacgagaaaa 120
 aacacgacag aaggcagagc tggccccacc ccgcgcaccg ggaggatcac cagaacacgg 180
 ctcgcaaggc ggagaacacc gaagagggcg agctgtccct ggatggccag gaataccgct 240
 ctctggccc cgacaaccgg aagaggaagg acgcgcacga gcacaggagc aatgaccgca 300
 gcgccgagag agacatcaag aggccgaggc catgagatga agtattcatt gtgggggggtg 360

atcagcgggtg acggactgag aactgggtgtt ttgagcgcca gtgcgtgata cctagttttt 420
gcatcgcggg aacatac 437

<210> 830
<211> 292
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-F9

<400> 830

attcccggtat cgacgggaga taaaacgggtg gagctgtcag tccgtcaacg ctccttccaa 60
aattgggggtc cggtaaaata accaaacttg aaggttgtaa taactgttgc caacaatttc 120
cgccttactt taaatggaaa aaaacaaaat tcatttccat tgcctatgat ggatttcgat 180
ttgcttttca catgaagcat caacataaat cgttgaccaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaggagctc aaaagggatc aa 292

<210> 831
<211> 429
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-G10

<400> 831

attcccgagc cgacgtactc ctttatggct gggagatggt catggggagc attgtatggc 60
gtcaagatag gctctccaac aaagagccgc attgccttga ggtagttgtc acaatcaaat 120
gtaaagcgggt gatacattct tgcaggcaaa acaaccatgc cacctttctt aactgctata 180
cggatccact gttcgttttg gtccttcaca tcaaagtatc cactgccctc gagacaatag 240
cgtatctctt catcagtatg caagtgtctt tcaaagaagt tcttcagctt ggctcatag 300
tttggaact tctctggaca tacgtcgcaa atgtccacat aagagtatcc cctggcctca 360
cggattttct tgagattctc gtctttctcc cagtcatcag cattcaggtt ccagcttaca 420
acaccaat 429

<210> 832
<211> 415

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-G12
 <400> 832
 attccccgggt cgacgggggc gagacaaaac caaagctgcg gcggcgcgca ggcgaatcag 60
 cagcggagcc aagcaaccga cgccaccatg ggtatctcgc gtgactccat gcacaagcgc 120
 cgggccaccg gtgggaagca gaaggcttgg aggaagaaac gaaagtatga gctcggccgc 180
 cagccagcca aactaagct ttcgagcaac aagacagtga ggagggtccg tgttcgcgga 240
 ggtaacgtga agtggagggc tctccgtctt gacactggta acttctcatg gggtagtgag 300
 gctgtggccc gcaagaccgc tctcctggat gtggtttaca attcgtcgaa caatgagctt 360
 gtgaggactc agacccttgt caagaatgcc attgtgcaag ttgatgcagc ccctt 415

<210> 833
 <211> 397
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-019-Q1-E1-G2

<400> 833
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 gaacgaaaga taaagaacgt gtactggttc ttggtgccac aaatagacct tttgacctgg 120
 acgaagctgt gattangagg ttcccccgca ggctaattgt aaatttacct gacgcatcaa 180
 atagagagaa aattttgaaa gtaatttttag cacaagaaga gttgggacaa gatactgac 240
 tggcgctcact tgctaatatg actgatggat attcaggaag tgacctgaag aatctatgtg 300
 taactgcagc gcactacccc attcgagaaa tcctagagaa ggaaaagaac gagaagaatg 360
 ttgcaaagtc agaaggtang cctgagcctg cattgca 397

<210> 834
 <211> 435
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-019-Q1-E1-G3

<400> 834

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tgtcagccag caaggggaag gcggccccac gtcttgatt cctgagagcc ggacggcctc 120
gtaatttttt cagaagggcc agnggaagcc ggctaggcta cccatggcta tttaccccg 180
cagttgtcga gatacacgac gtgtacatgg tggttaagtgg cgagagagtg tgtgaagaag 240
tacaccctg cggggttata aatgatctat tcgaatagcc gtgtctgcgg taaaggactt 300
ctgggttgcc tataacagtt catagacaag tgaaagtgga tactcttaaa ctgcgaaggt 360
aagtgtgagt gctatggatg gccttctcgt agggagatga gagcggatcc atagtgtgt 420
actgaatggg gaata 435

<210> 835

<211> 429

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-019-Q1-E1-G5

<400> 835

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ctccctagat gggagaaggg tttccctctt ggtccttggc tcccatggcg cgggagggga 120
gagagcccct ccgagattgg atctatctct atttctcgt tctcagatcc ttccccttca 180
ccgtttcttt tatatccgga gatccataac tccgattggg gtgaatcttt cgcccagatt 240
attctcgtaa aattagcttt cttgcggcaa aagaagagcg tcaaccgcct tacgggtggc 300
ccaagagagt gccangcgcg cccctatct cctggccacc tcgggcaccg tttctacaag 360
ttggagcatg anggtgtttt tttgatgtct tccttatgag tggcggtcgg gggacgagcg 420
atggtcttt 429

<210> 836

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-G7

<400> 836

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cttatatctt teggagtagt ttgtcgtttg ctctagtgtc tcacttatat cttttagagc 120

acgacgggtgg ttttatttttg aagaaataca tgaactctca tgcttcactt atattatatt 180

gagagtcttt agaacagcat ggtaatttgc tttggttatg aatttagtta taatatgatg 240

ggcatccaag agggacataa taaaaactat catataaagt gcattgaata ctatgagaag 300

tttgattctt tatgattgtt ttgagatag aagatgggtga tattagagtc atgctagtgg 360

agtagttgtg aatttagaaa tacttgtgtt aaagtttgtg attcctgtag catgcacgta 420

tggtgaac 428

<210> 837

<211> 313

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-019-Q1-E1-G9

<400> 837

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gctgctgatg gaagggggcgg agcgacggag gaagacgcct cccgatggat caaatcgggg 120

gtagtattgt aatttcacac tatttcacct ggtcgaaag atgccccag cgacaattat 180

ttcggaacgg agggagtaat tttttacata acctagaatg ttcttctgaa ctataatttt 240

gaatgagcca ttatctgaga tttaaatcta gccaaaaatg atcatggctg atataatgca 300

ttctcagaat gct 313

<210> 838

<211> 435

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-019-Q1-E1-H1

<400> 838

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ggagtgagca gcggttgcgca gagacttggg agtagatgga ttggagtggg ggggagcctt 120
 tattatatga gagtccaaac tctgttgcgt tcacatcatg ctggctctat tctgcttctc 180
 caattaattc cctctgcatg taattgagga tgcacattg accgttcaac gtctcgagaa 240
 ccgctaccca ctccctcctt ggcattcaag cacctatgga cccgtcgatg acgagggtgc 300
 tatggtgact tcgtaaattt caagatgata gtgccgtgca tatgtgcatt catanggggtg 360
 agtgtatgcg cgtgcatata agcgcttgcg tctgtactgt gtanaaaaac gtaaattgcat 420
 gtcaaaaaga gacta 435

<210> 839
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-H5

<400> 839

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 ggatgaagtg ttcatgatc gagaaggtct cgatgtgaga agaaggaaga gatgcaagag 120
 ctcatgtctg gggatgcccg aggcacccca agtaaatatt taaggatact caagcgtcta 180
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 gattcgtttc gttcatgcca tatgtgcaat cttggagcgt cttttgcatt tagttttcat 300
 ttttatttta tgcaccatgc tggatgga tagtccttgg ttgatttata gaattctcta 360
 tgtacttcac ttatatcttt tgagtatggc tttatagaat gttcatgtg cttcacttat 420
 atcatttg 428

<210> 840
 <211> 241
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-H6

<400> 840

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 ctggtgcttt cccaaggctt gctactgcta tcctatgatc tgcccgagtg gctttatctg 120

ttatctgtct gtttgaacgt ttgctttgtg gtgtttgttt tacaacctgt tgtgttgtaa 180
gaaccttgta tctttgaacc tgctttgcac cttgggtaat atgcatgcta tctgggtatc 240
t 241

<210> 841
<211> 443
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-019-Q1-E1-H9

<400> 841

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acacttgagc agttgaataa gaaaaaaatt aaaaaaaaaa gggaaatttg taagtgtaca 120
atcacanatt tatcaaataa gtggtgagat tgctggcacc acagaggctg gtgagcaggt 180
ggctacacca caggtcaacg aggatgattt gacacttgag aggcttgaag attttcggtc 240
ccaactccag gagcttgaga aagagaagaa caatagggtg gagaagggtc ttgagtatgt 300
aagcatggta catgatctat gtaccgtctt gggcatggat tttctcagca ccgtgactga 360
agttcatccc agtctagatg actccattgc tgataactgc aagagcatca gcgacgagac 420
attatcaaaa ctttacaaga cag 443

<210> 842
<211> 444
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-A10

<400> 842

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acataacaaa ctttgggggc cacattcatt tgcaggaatt ttgcaggcaa ggaaaatggg 120
aaaaattcct acaaaacaga gggccaatat gtcacttact cggcacatga tgagaaattt 180
ctgtgcactt caaactactc cctccgtctc aaaatataaa aacatttttg acactttgca 240
agtgtaaaaa acgttcttat attttgagac ggaggaggta caatacaaat agtttggatt 300
tatctttcca tgctttgttg ccaacttcat taagaaaaag tactcccca ttaaaaatgg 360

gtaagtaacg tttccttttg attttgtagg gtattttctc ctgtagttga attccttttc 420
ttctctcgat acatactcca tatg 444

<210> 843
<211> 408
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-A11

<400> 843

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catctccgaa gaggaggggc ggaacctcct ggctgaaatt catgccggac ttagcgggtca 120
tcacgtgca gcccggtccc ttgtaagcaa agccttccct acagggtttt attggccgac 180
ggcccgggca ggcgcttagg acttagtcca actatgcacc ggttgccagc tctttgcaaa 240
ccaaagccat atgccacca ccgccctcta aactatcccc attacttggc ccttcacggt 300
ctgggggctt gacatggttg gacccttaa aggcggaacc tacaacaaa aatacatact 360
ggtcatgggg gataagttca ccagatggat agaagccaag cctgttaa 408

<210> 844
<211> 448
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-A2

<400> 844

attccagggt cgacgggacg cagtaccaca ctatgattat ctcaagctca agatgcccgg 60
tccacgcggc gtcataacag tcaatggaaa tacggaacgc tcccttcgta cagaagagca 120
cacagctgcc ttagcagcgg aagtagagag cggccttctc aagcaaaacc ttaatttggc 180
tgccgagcca cggacatcgt taagagggtc cgaactactc tacagcagga gagctcggct 240
cgccaggagc tcgactagca atctggcctc cgtcttagtc ccgatcaagt ggtggcattc 300
gtgtgcgcgc tacataacta cgcactcaaa atcccatggg caacgacgga gggataacta 360
gcttgtggtc caaagtacgg gtcaaccgac atcggataca cacatacttt cacttttact 420
tgtttctttt tcaggtctca atcccaca 448

<210> 845
 <211> 459
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-020-Q1-E1-A4

<400> 845

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 ttccacggac ccaaagacag tatttaccag ggtggtgtgt ggaaggtcag ggttgaactc 120
 accgaagctt acccttaca atcccttcc attggcttca ccaacaagat ctatcacccc 180
 aatgtcgatg agatgtctgg ttctgtctgc ttggatgtga tcaatcagac atggagcccc 240
 atgtttgacc ttgtgaatat ctttgagggtg ttctgcccc agcttctcct gtacccgaac 300
 ccctcggacc ccttgaacgg cgaggcggct tcgctcatga tgcgcgacaa gaatgcctat 360
 ganaataaag tcaaagaata ttgtgagaga tatgccaagc ctgaagatat atccccagag 420
 gaggaagaag aggagagtga tgaagagctg agcgacgcc 459

<210> 846
 <211> 462
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-A6

<400> 846

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 aggtgtgaga ggaggatggg acaacctgct tgcagttatc cctggcgggt catctgttcc 120
 tttgttgcca aagcacatat gtgatgacgt gttgatggac tatgatgcac taaaggctgt 180
 acagtccgga ttaggcactg cagcagttat ggtgatggac aaatccacag atgtagtgtga 240
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 ccgtgagggt acaggatggc tctggatgat catggagagg ctcaaagtgg gcaatgcaaa 360
 gctagaagag atcgatatgc ttcaggaggt gacgaagcag attgaaggcc acacaatctg 420
 cgccctcggg gatgctgcag catggcccggt gcatggtctt aa 462

<210> 847
 <211> 449
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-A7

<400> 847

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 acataaatta agcaacgtga gtacaaatgt acccagcaag attacatca gatctaacta 120
 catatgcatc attatcaaca aaggggatgg tgggggttaa ctgcagcaag ccagctttga 180
 ctcggtggct tcttgaacta cgactgcaat gtaactcttt gaggtggcgc acacgagtcc 240
 acatattcac catatcaata caccactatg catccgctcc tgtctcccta cgagaacgcc 300
 atccatagaa ctcacgctta tcttgcgat ttaagagtat ccactttcac ttgtctatgt 360
 actgtacagg caaccagaa gtcctttacc gcggacacgg ctattcgagt agattatatt 420
 aaccctgcag ggggtgtactt cttcacaca 449

<210> 848
 <211> 411
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-A8

<400> 848

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 ggcttagtgg agtcagtcac cagcctctcc gttgtttgaa caactgaaca acaacatcaa 120
 ggggcgccaa aacatattgc tgatctgaga gacatccgag acatgaatga ggaaaaaatg 180
 agaaggtcgg ccattgttgg ctcaagctca ggaggtggtc gaaagcctgg ctccacatgg 240
 tcttagcact actgtcacac atgggtgttcg ggccacttcc accagtgtct tgcggggttg 300
 cgttccgcga gagcaatgac ggggagaaca agatgatgcy gtgctttgct cgcttcgatt 360
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<210> 849
 <211> 442
 <212> DNA

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<223> Clone ID: LIB103-020-Q1-E1-B12

<400> 851

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gcggccgctc gaatacctgc agcacgagaa tttcatggaa tgagcagtca gttagtcaag 120
gcaatgccga gtcttatttt taaaaagtc caggaagaca attgtacttc gtcaacatgt 180
gccatttgct tggaagacta cagtgttggg gaaaagataa ggggtgctgcc ttgtcgtcac 240
aagttccatg ctgcttgcgt ggacctgtgg ctacatcat ggaggacatt ctgccctgta 300
tgcaagcgag atgcaaatgc tggaatgtca aatttccttc catcagagtc tacccttttg 360
ctttcttctg ctattccctt gccagctgaa tcgacagctt tgtcttcttt tcgttcaatg 420
gtagcagcat ctctcc 437

<210> 852

<211> 438

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-B2

<400> 852

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tgatacactg atcgtaatcc caaatgataa gttactgact gctgtttctc caaatactcc 120
tgtgacagaa gcctttaatt tggcagatga tattctccgg caggggtgtcc gtggaatctc 180
agatatcatc actgtgccag gtttggttaa tgttgacttt gctgatgtac gatcagttat 240
gtcagatgca ggttcaccc tcatgggaat tggaacagca acaggtaaga cagcagcaag 300
agatgctgcg ctcaatgcc aacagtctcc tctacttgat attggtattg aaagggcaac 360
aggaattgtg tggaatatca ccggaggagg tgacctaaca ttgacagagg tgaatgcagc 420
agctgaagtg atatatga 438

<210> 853

<211> 424

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-B4

<400> 853

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tttacctta ttcaaggaat caatacaatt tttaggcaaa gaagaaaacc aagtttttagc 120

acgattccca tagggagaac ggaaatagct tcaatttaac aatatcatta tccacatctt 180

ttttcttttg catatcacac aactcaagga aagtatttag atgggatgca acatcttcat 240

taggactacc agaaaattgt tctttcataa caggattcaa caaagcggca ttaatttcat 300

aagattccgt actagtggag agagcaatcg gagtactaat aaaatcatta ttattagtgt 360

tggaaaaatc acacaacttg gtattctctt gagacatcat gacaaagcaa gaaatctagc 420

acac 424

<210> 854

<211> 449

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-B5

<400> 854

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agcataaatc ctacctggcg atcgctctct cgtegccttg ttagagagcg atcatcgggt 180

tgtatctggc acttgggaagg gtgtatttta ttcagtatcc ggttctagtt gtcataaggt 240

caaggtacaa ctccgggtcg tctgtttacc gaagatcacg gctattcgaa tagattaact 300

tccctgcagg ggtgcaccac ataaccacaac acgcttgatc ccattcggcc ggacacactt 360

tcttgggtca tgcccggcct cggaagatca acacgtcgca gccctaccta agcacaacag 420

agcggtcagc acgccgtctt aaccctaag 449

<210> 855

<211> 459

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-020-Q1-E1-B6

<400> 855

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gattactttc ctgggaacac cggggatata tgacggttgc catgcaaaca catcgacatt 120
cgcccgagg aaagcaacga gcgcgctttc ctatttaggg ccgagcgtgg cactgatggt 180
gaaggtagca ccagtgccgt ccccttggc ggacaccttc ttggtctcag gtggagctgc 240
cattgctttc ttgcgcttgc cggtaggact cgatgggtgc tctcgacgg tagtgacga 300
cttcgaagag gtgcgcttgc cggagtagac atcagagctc ttgccggact tggcttctt 360
cttccccccg ggagcttcag cggcaagtgt gttgtgatca gttgcggctg ctgcttccc 420
gtagatcttg tcggcacaga taagagcatc cttcttgctc 459

<210> 856
<211> 453
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-B8

<400> 856

gccgccagg accggtctgg aattccccggg tcgacgggta tgccgctagt actttgtttt 60
caatggcttg tagatttttg caataagtat atgagttctt tatgactaat gttgagtcca 120
tggattatac gcactctcac cttccatca ttgctagcct cttcggtact gtgcattgcc 180
ctttctcacc tcgagagttg gtgcaaactt cgccggtgca cccaaaccct gtgatatgat 240
acgctctgtc acacataagc ctcatatat cttctcaaa acagccacca tacctaccta 300
tcatggcatt tccatagcca ttctgagata tattgccatg caactttgat catcatcata 360
tgcatgactt gagcatttat tgtcatattt ctttgcatga ccgtaagata gctagcatga 420
tgttttcatg gcttgtcggg ttttttgatg tca 453

<210> 857
<211> 419
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-B9

<400> 857

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gcgccaagca gtacgccgag gagtacgatg cccaggacaa ggagttgggt cagcttaagc 120
 gtgaggcccg gatgaagggt gggttttatg tcagtcctga ggccaagctg ctgtttgttg 180
 tcagaatcag aggtatcaat gccatgcacc caaagaccaa gaagatcttg cagctgttgc 240
 gtttgaggca gatattcaat ggagtgttcc tgaagggtta caagggcacc atcaacatgc 300
 tccgcagggt cgagccatat gttgcatatg ggtacccgaa cctgaagagt gtgaggaggt 360
 tgatctacaa gagaggttat ggcaagctca acaagcaaag gattcctctg accaacaac 419

<210> 858

<211> 286

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-C1

<400> 858

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 agtgggagca acttcattac actacggaac tgtaagtga tgtcagctca gcgtgagtcg 120
 atttaaaacg tcggaactgg gatggaactg tctggacata tgatatgcgt gttgcagtac 180
 agctgacatt ggagagcggt tcttgaagaa atttggtggg tagctatcac tcatctgaac 240
 attgtgcgaa ttctgaactg tagactgtga ccctaaatga tactgt 286

<210> 859

<211> 453

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-C10

<400> 859

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 gaagtactcc aactccaaca ttgaaattca cactttcaac cagagccaat accctcgcat 120
 tgttactgaa gacttcttgc cacttccaag caaagggcag acaggggaagg atggctggta 180
 cccccaggc cacggtgatg tgttcccctc tttgaacaac agtggaaaac tcgatacctt 240
 gctgtcacag ggaaaggagt atgtcttcgt ggcgaactca gacaacttgg gtgctatagt 300
 tgacatcaag atactaaacc acctgatcac taaccagaat gagtactgca tggaagttac 360

tccaaaaaca ttggctgatg ttaaaggtgg taccctcatc tcatacgaag gaagagtcca 420
gctcttggag attgcccaag tccctgatga gca 453

<210> 860
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-C11

<400> 860

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catctacgcc cgcgccaagc agtacgccga ggagtacgat gcccaggaca aggagttggt 120
tcagcttaag cgtgaggccc ggatgaaggg tgggttttat gtcagtcctg aggccaagct 180
gctgtttgtt gtcagaatca gaggtatcaa tgccatgcac ccaaagacca agaagatctt 240
gcagctgttg cgtttgaggc agatattcaa tggagtgttc ctgaagggtta acaaggccac 300
catcaacatg ctccgcaggg tcgagccata tgttgcatat gggtagccga acctgaagag 360
tgtgaggggag ttgatctaca agagaggtta tggcaagctc aacaagcaaa ggattcctct 420
gaccaacaac 430

<210> 861
<211> 436
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-C12

<400> 861

taccggtcag gcattccccg gccgacggga agtttgtgaa ggaccacgga ggagatgaga 60
ttcaagccgg cccacccgtc aactagtatc tttgtgacct tgaggttgcg gatagttggt 120
gagaccaaca tcggcaagca cccgaccgca gttacgcgat cagggtgatc ctcaatgttg 180
aagatgatag gcgtgctgga ccatttcagg ggcttgctg actctatgga tggctctgct 240
gcattcactt cccgcatcca ctatttgagc tggcggtgcg aagtatgcag agaggcgcca 300
ccgtcaacgc acaggacctc tgtggctttc tgaaattctt gctcatcggt ctcatcatca 360
tccacgtctt cgtcacgctc gtcattctca tccttgctac ggccgtgggg aggctgtct 420

ccttgccgct gcttgg 436

<210> 862
<211> 441
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-020-Q1-E1-C4

<400> 862

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atgatgatgg tgataaaaaa aagggcgggc aatttcctgc agggaaaggg caggggaacc 120
aacccccgga ttgcaaccaa cattgagggtg cttcaaacad gaagacaatt tcccttggct 180
gaaaaatgtt tggttctgct tgatgcaatg tcgttgattt tggttctgtg gaccatttgg 240
gggattgatt gcgttgggtt tgtggaaaaa ccggtggggg gtttctttgt cagggacatg 300
gtattatata ctggtagcat ttcaattgtt gtattgggtt gaaatacttt gtccgctgct 360
gcgagtgatc atcgatgttg ccattttgtt agtcctactt gttttgcttg gaaattttga 420
tataactaagt atttgtgtgc g 441

<210> 863
<211> 447
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-C5

<400> 863

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acgtatccac tgtcctcaca ccatgcaagt cacggtaccc acattatcaa aagatagcat 120
acgcggtctt gatggcatct cggaactat gacattactt tcaagagtgt cactactttc 180
aagagtgttc aatcacggtg gcctccgaag taccactcaa tgatataata aataaccgtg 240
atgccaaggg gccaaatttg ctaagtgggc catcgagctc tcccgttcga catcatatat 300
aaaccagggt gagccattaa gtcgcaagta ctggctgact tcgtcgccga atggacagaa 360
gcatactcca attggatcat gcactttgac gactctaaga tgttggccgg tctgggagcg 420

ggtgttgtcc tgaaatcccc caccgga

447

<210> 864

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-C6

<400> 864

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agggcccaaa gattggcggg ggcgggcgga agcgttgaaa gttgattacg ccatagacat 120

agagttgtgc tgcctagcct tatttctat cctactatca tagacctttg tcaagttatt 180

accccgccct cttgaatttg caccttatct ctgaggctga atggtgttaa cgttttggat 240

tgtcttgatg agtttattta taatgaatgg ttcttatgtt ggttcttaaa aaaaaaaaaa 300

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa acaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360

aaagcggccg ctctaaagga tccaggctta cttacgcgtg catgcaacgt catagccctt 420

caaaagtgtc acctaa 436

<210> 865

<211> 289

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-C8

<400> 865

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tcgacggcca gatcatagga tgggtgtctca tggcaaaciaa tccaccaggt accgtcaata 120

atgcctctca gctgcagaac ggagtggcgt gaatactact agtactatcc atgcagtgga 180

cgaatctggc agctgcagcc attcaactca ggatacttta gagggtaatg tgagctttga 240

gttaagtgtg acattcatgc acatgagagc gtctaacgag tttcaatat 289

<210> 866

<211> 247

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-020-Q1-E1-D1

<400> 866

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ttgtaaatct cgtttttata tagtcctttc ctgtcaaacc ctgcccgtcg cagcatcagc 120
aatagtacta ctactactac tagtgccaaa naaaaaaaaa aaaaaaaaaa aaaagaaacc 180
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa cgggcggccc aaaaggttca aacctaactt 240
acccttg 247

<210> 867

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-D10

<400> 867

accggtcagg cattccccggg tcgacgggaa tgttactgtc tacaaagctc gacttgctgc 60
aaaaggtttt caacaagttc aaggaattga ctacgatgag accttctcac tcgtagcgat 120
gcttaagtct gtccgaatca tgtagcaac tgccgcattt tatgattatg aaatttggca 180
gatggatgtc aaaactgcat tcctgaatgg atttctggaa gaagagttgt atatgatgca 240
gccggaaggt tttgtcgatc caaaaggagc taacaaagtg tgcaagctcc aacgatccat 300
ttatggactg gtgcaagcat ctcgagttg gaataaacgc tttgatagtg tgatcaaaga 360
atttggtttt gtacagactt ttggagaggc ctgtatttac aagaaagtga agtgggagct 420

<210> 868

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-D11

<400> 868

cgccgccaaa gtaccgggtct agcattcccc ggctcgacggg ggggcgttaa atgatagcgc 60
tagttgggag gcaacccaat tttatttgtg tttattgctt ttgtttctgt ttagtaataa 120
aattttgcat ctaacttctg tttagatgtg ttttatgttt taattagtgt ttgtgccaa 180

tagaacctat aggataacct atgatgatag ttaatttgat tctgctgaaa aacagaaact 240
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 tctgctgata aatagacaaa ttgtccagga cttcctatct tggtagtatt tttagagttc 360
 aagaagtttg cgttacttac agattgctac agattgttct gtttttgaca gattctgttt 420
 ttcgtgtggt gtttgcttat tttga 445

<210> 869
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-D12

<400> 869

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 acatgtatca tgtttccggt taatacaatt ctagcatgaa taataaacat ttatcatgat 120
 atgaggaaat aaataataac ttttattatt gcctctaggg catatttctt tcaccataa 180
 cccacaggtc tactggatcg aaaccagact cttctttaca acccggttc taatgtatct 240
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 atcaaacacc atgttattct cgttggtcaa accccattc tagcttctgt ctagtactg 360
 aatgattgcc taccggttg gaactttggt accatcgtgt attgcactca acgaattcac 420
 tgaaatacaa ctcatgggt 440

<210> 870
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-D2

<400> 870

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 tgtctgcgga aggtccgacc tttgtggatg gtgcaatgaa ggaaataaaa cttgaggtga 120
 aggaacaaaa aaggggcaaa taatgacttc atgggttaag gacaggacac ctcaatggac 180
 aaggaggagc tcctttggac ccccttgcca aggcgaatt acaagaagac ccactccctc 240

taaaaaggaa aaagaagaat gtgcacagta tgggcgatga gtccttcatg aatacctgtt 300
acctccaact cacaggataa tcttgagca gccggccgta ctgccattga catagatgcc 360
gagcttggt caagtgttca gaaaacatca gatgctaagg ctggagctga acttttctat 420
gagccaga 428

<210> 871
<211> 419
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-D3

<400> 871

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gcgccaagca gtacgccgag gagtacgatg cccaggacaa ggagttgggt cagcttaagc 120
gtgaggcccg gatgaagggt gggttttatg tcagtcctga ggccaagctg ctgtttgttg 180
tcagaatcag aggtatcaat gccatgcacc caaagaccaa gaagatcttg cagctgttgc 240
gtttgaggca gatattcaat ggagtgttcc tgaagggttaa caaggccacc atcaacatgc 300
tccgcaagggt cgagccatat gttgcatatg ggtacccgaa cctgaagagt gtgaggggggt 360
tgatctacaa gagaggttat ggcaagctca acaagcaaag gattcctcct gacaacaac 419

<210> 872
<211> 448
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-D5

<400> 872

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aaagttgtgt gacaaatttg tatcatgggg tgctctttga ttgccttcct tatgtgtgga 180
ggtcgggctc acgcgatggt taactcctac caacccttcc cctacgagaa tgcgtagtag 240
tactttgctt tgagggttaa taaacttttg cagtaagtac atgacttctt gatgactagt 300
gtgagtccat ggattatata cactctcact cttccatcat tgctatcctc tacggtagtg 360

tgcattgccc tttctcacct tgagagttgg tgcagacttc accggtgcat ccaaaccg 420
 tgatatacgc tctatcacgc ataaacct 448

<210> 873
 <211> 454
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-D6
 <400> 873

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 tcctgagggg catgatatag ctctgcctcc aaaaagtgcc ttggaggccg cacacgctcc 120
 ggcaccgata ctcgactcgg agattgctgc gtcctttgag gatgaacggg tggacgtcac 180
 cttgggggct gcgatcttaa aggcgatcga gccgaacgca agccccgcac tccgcatggc 240
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 cgaatctgat tgggcgccctg taatggagtt caccgctgcg gacatctttc agtgctcacc 360
 tttcggtgat atcctgaatt ctctcaagtc tctctctttg tcaggagagc ccaggccgaa 420
 ctatggtctg cgaggttggg atttgacga cgaa 454

<210> 874
 <211> 454
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-020-Q1-E1-D7
 <400> 874

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 agggaaaagc caggaaaaaa aaggcggtg gttcgttttg gcgcgcccg gatcggtcgc 240
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 ttgtgtggtg cgttgagggg tgaggttgcg aagaaatgga aatggtgctt gctggcgga 360

cgatccggct ggctggccct tgctgccttg cctgcttttg cgtccggttt ctattaaana 420
 aaannnaana aaaaaaaaaa aaagcggccg ctct 454

<210> 875
 <211> 384
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-D8

<400> 875

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 ctgcagatg aaagactgca ctggctcagt attcaaattg aagtttgtcg ctgaccatcc 180
 cttcttaaaa tgtttgttct tgcgtgctga aaacgtgggt agcagttggg aactgcaaca 240
 acatttggtg gactgttcta agcacatgga gctttgttta agatgtaatt ttgctattag 300
 aatatgctag tcccagttgc tggtataaat tacctcctgt caaagaatta ttgaggcggt 360
 tgtcaaaacc atgatctttg aggt 384

<210> 876
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-D9

<400> 876

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 cgagcgagct tgggaaagga tgccaggctc cagttctgta tagtaggtct aggattaagt 180
 gtagggcaag gtctagactt ccctccatgg ggtatggcat gatgccgagt agaagcacta 240
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 ggtggagaga aggtgcggga ggcggatctg actccagctt ctccaataag ctogatctcg 360
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 ggaacggaaa taggacgagg 440

<210> 877
 <211> 469
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-E1

<400> 877

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aaaaatagat cttgattccg ctagaattgg taaacttgag gatataatta ccaacttagg 180
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ctatgttcct aaaaataaag gtcaaacttc tagtaaggga gacgcggacc tcaaattccat 300
aagtgttcct cccaattgtc tttctatcat taaggaacct tttgctacaa atgaatttct 360
tgaatttttt cccaaagggt tattcattgc taaaaaggga gaaaccctta aagattatta 420
gtgctctact tatgaatcaa gtgccaaaga tggcactcct tagatctat 469
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<210> 878
 <211> 439
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-020-Q1-E1-E11

<400> 878

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cagaggccgt ggtggtggtt acagaaacaa tggaaatgac aacaatgagg gaagggcctc 120
cagtcaagac cgcggtggtg gctggtctca ctcttctgct tggaatgctg ataaaaaggg 180
aagcgtgaa gacgatcaat ctttctcaaa gggcaagtcc agctggggga gtgacaacaa 240
cggtagctgg ggagctccaa aaccatctgg tgggtgatgat caggcaggaa agaaggatgg 300
aaacaacacc tggagtcaaa acaagccatt ttctggcgat ggatcctcta tcctgngcca 360
gtgggctcct gctggcgggc ccaccgctgg tactgcagga tctgcaggcg gaggaggatc 420
atggggaaag ggcaatgaa 439
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<210> 879
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-E2

<400> 879

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 ctaagaaacg ggttaactgg cattgatttg gtcaggtgct gggtttcttg gtggatcata 180
 cccttgagtc gtcgcaccgt cttaatgtgc acttacactg gtggtgtaaa ggatccactg 240
 caccacagct ctgcaccatt aactaacgag gaaattaaca aaatgggtaa gtccctttta 300
 aatgaagatc cagaagattg cattaaagtg ggcttgaaa cttctgcaa acttaaccgc 360
 ccaccggatg tgattccccg aatttaatta cttttaactc attactcaa tacttgtaa 420
 cccaaccttt gatgaccttt 440

<210> 880
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-E5

<400> 880

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 agtttttgac ggtaaggaat caatgattac agctatatca gaataccag caaatattca 180
 gggaaagggt gtaatgatcc gatgagaagg accaaaacga agtcccggga tgctgacat 240
 gttgactcca acaagtgcaa tattgggagc tggctcttggg aatgagtgtg ccctgctgac 300
 agatggtaga ttttctgggg ggtcgcatgg atttggtgtg ggccacatat gtcctgaagc 360
 acaggaacga tgcccaattg gtcttggtga gaatggcgat acaatcacga tcgacgtcgg 420
 gaagaaagta attgat 436

<210> 881
 <211> 425

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-020-Q1-E1-E6

 <400> 881

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 aagtgcatta tgatatttca cattatgacc atctgaatgc gaatgatata ttatccggct 120
 atctcagcca tgtgcactca agccgtgact tggagattga aatgggtcaag aagttgcagc 180
 tgaagtatga ggtacgttct tccaacttat attctgccag tccccaagtc ttcagattat 240
 gagaaaaccg gaatgatctg tagactttat gatataggct tagactttac ctttagattt 300
 ttctggagtt caataaaata gaacaaagct tcacctgtag tccccaaggg ccggttcatt 360
 tgaccgtaaa tgagccggtt ctttgaattt tcataaccgt ctcgtaaccga actcaacaaa 420
 tattg 425

<210> 882
 <211> 444
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-020-Q1-E1-E7

 <400> 882

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 gcagcccgct gacgacgacc aggagtagtt aggaggatcc caggaaggag gcctgcgcct 120
 cgttcgatct gtatcccagt ttgtgctagc cttcttaagg caaacttggt taacttatgt 180
 ctgtactcag atattgttgc ttccgctaac tcgtctatga tcgagcactt gtattcgagc 240
 cctctggcct gtattatgat gcttgtatga cttatttatg ttgtagagtt gtgttgtgat 300
 atcttcccgt gagtccctga tcttgatcgt acacatttgc gtgcatgatt agtgtacggt 360
 caaatcgggg gcgtcactgc tgcacacgga agtttctagc atgaataatc ttatgatccc 420
 tttgagagtg ggtggcattc cata 444

<210> 883
 <211> 466
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-E8

<400> 883

cgccggcagg aaccggtcag gaattcccg gtcgacggg aggagcaatc ggggtgctaa 60
taaaatcatt gttgttggtt ttggtgaagt cacacaaatt agtattatct tgagccatcg 120
tgacaagcaa gcaaactaac acacaagcaa acaaaaagca agcgggcaaa agaggcaaat 180
ggcgaaagag agggaggata gaaagagaga gagggcaaat aaaacggccg gggagaagtg 240
gcgagcatg tcggatgagg agaaggcaaa gtatggcggc aagaaggcag atgccccagc 300
aagcaaggtg gtgaacaaga aggagagcac cagctccaag aaggccaaga ctgacgctga 360
cgaagaaggt tctgacgttg aggatgatgc cgaggaggac gaggagtaaa tagtagatga 420
gggaacagca gcggtgcaaa tcagcgtttg ctgcttaagg ttttagc 466

<210> 884

<211> 449

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-020-Q1-E1-E9

<400> 884

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aaaaggagct tgatgctctc ctttctgatg attccttggc aaatgtccca tttctcatcc 180
ttggcaataa gattgacatt ccatatgcag catctgaaga agagctgcgg tatcacctag 240
gccttagcaa cttcacaact gggaagggca aggtgaatct tgttgactcc aatgtacggc 300
ctcttgaggt gttcatgtgc agcgttgtec gcaagatggg ctatggcgat gggtttaagt 360
gggtctccca gtacatcaag tanggetcac agacgtcaaa ttttcttgtc atcggttggg 420
tgtttgtcac gacagcaaat gatatcatg 449

<210> 885

<211> 465

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-F1

<400> 885

cgccggcagg taccgctcta gaattcccggt gtcgacgggt aatgatgaag atctaaaagt 60
tattgatgtg tcccctatta aatctttggt ttgtaatatg aatcttgata atgatgggac 120
tggagatgac tcaacttttag ttaaaaggcg tcctaacgat tcagagtttt tagatcttga 180
tactaaattt ggtaaaagtg ggactggaga ggtcaaaact ttacatagca ttgaaccac 240
tattatggat ttcaaggaat ttaattatga taattgttct ttaatagatt gtatttcatt 300
tttgcaatct gtgatgaatt ctctcatgc ttatagtcaa aataaagctt ttaccaaaca 360
tactggtgat gccttgatgc aatcttatga agaaaaactt gaatcgaaag tttctatacc 420
tagaaaactt tatgatgagt gggaacctac tatcaaaatt aaaat 465

<210> 886

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-F10

<400> 886

accggtctag aattcccggtg tcgacgggta tttgatggca tgtagatcat cgccgcgtgc 60
catgtggatg tgaaggagat aatcctcgat ccataccacc gggctctgtt tgccatcgta 120
tgattcgatg tttacgggtt tgaaaccctc tgggatttta tgatccatta cttcattcgt 180
gaagcatagc ggggtgtgcg cgcctctgta ctgggctata tcacgacgta gtcggaagc 240
actatgtctg ttgtgttcgg cccggccgaa tttgttgcac ccggagtga gatcattgtc 300
acatgccgta gggcgccctg gcgatccgta gatcgatttt gtttgccttg cttatcctc 360
cagtatgtct cgcaggtcgg gcgcattttc ccgtgcctta gttgagcggc gtcggggcat 420
ggcttggg 428

<210> 887

<211> 451

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-020-Q1-E1-F11

<400> 887

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caatacgaag agatgatcga taattgccc ggggaagagg ccggacatgg cggcggagaa 120
ggggccagac atggcggagg agaaggggcc ggacatggcg gcggagagaa ggacgtggac 180
tccacgcagc agagtctgct ggtactaagt tcaatcgtgc gggaccctca tgttcaagca 240
ctgcttcgca aggagatgag taccgagaga gttgcatcta gagaggaggc taagctagag 300
caactggtgc tagactcgaa cactccactg tatgatggtt gcaatcctga ggtgacccgc 360
ttgagtttca tgctccaact cctgaagacg aaggctaaaa acanatggac cgacactagc 420
ctcgatgagc atctcaggta cctaaaggat g 451

<210> 888

<211> 437

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-F12

<400> 888

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tggggaccgg caagtcgcga gttcttacct cgaaggcgtc attctggcaa accaagataa 120
ggataacttc ctctgctcctt actttcccca gtaagtcctc ccctcaaccg ccccgtaaca 180
tatgaattct tagatttcga tcgtttttct tttaacattc cgtgttttct gcagtgcac 240
acattgcacg ctcatcctcc taagccccaa atattccatg gccacgtatt tcgactcgga 300
ccgtcagtcg aacgtagact acacaaatgt caagaagggt cttgatgatg ttctccccgg 360
ctacgtcaaa tctggaggca ccttcaccag gcctattcgt aagtacggca agcacgtgtt 420
ctcccacaat acgacgt 437

<210> 889

<211> 462

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-F2

<400> 889

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 cacaaaccgg atacgtgtat attttgaaag gtggggcagt aagctggtgc agttgcaagc 120
 aaaccgtccg tggcgggaat caacatgtta agccggataa agggcagcct cgggaggcac 180
 acataaagca atatgggtga aggagttcaa ccaccgacct aggagtcaat accaatgcgt 240
 cgggcccgat aaagctcttc tgtgacaaca ctggagctaa tgcacttgcc aaagaaccca 300
 agtttcaaaa gaagaccaag gacaacaagc ctccctcaa ctccaatcgt gaaaatgttc 360
 aagaatgaga cgtagagaat tgtaaagtac atacggacct gaatataaca gattcgttga 420
 acaaacctct ccctagagca aaacatgatc aacaccagaa tg 462

<210> 890
 <211> 467
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-F3
 <400> 890

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 ttggtgcttg cccaacacag ccaagaggca caaccagtgg aaaggcctgt atgggaggtt 120
 ggactgggaa ggcaacttcc ccacatccgt gacagatccc cagccaatgg gcaaggctcg 180
 catgtgcttc caccctgatc aggacaggat catcactgtt cgtgaatgcg cccgatccca 240
 gggcttccct gatggatacc atttcgctgg caacatccag agcaagcaca ggcagatcgg 300
 gaacgctgtg ccgcctcccc tctcctatgc gctagggagg aagctcaagc aagccatcga 360
 cgccaagcct cgactggctt aagttcactg cactgcatga tacaagtccc gtcatttttt 420
 ggttggtccg agtgggactt aattcatcat tggcccctat atgtatg 467

<210> 891
 <211> 423
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-F4
 <400> 891

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aagcaatacg ccgaagaatt acaagccccg gacaaagaat tggttcaact taaaccttaa 120
ggccccgtta aaggttgggt ccaagtcaat cctgaaggca aactgccggt tggtttcaaa 180
aaccaaagga acaaatgcaa tgaaccaaag aacaaggaaa ttcttgacc tggtgctttt 240
gaaacagata ttcatggat tgtccctgaa ggtaacaag gcaacaatca acatgctccg 300
cagggtaag ccatatgttg catatgggt cccgaacctg aatagtgtga gggagttgat 360
ctacaaaaga ggttatggca agctcaaca gcaaaggatt cctttgacca acaacaaagt 420
cat 423

<210> 892
<211> 461
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-F5

<400> 892

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ttgatggact atggaataag gagtgccaaa agcttaagct tggggatgcc caaggcacc 180
caatatattc aagaatagcc aaaagcctaa gcttggggat gccccggaa ggcacccct 240
ctttcgtctt tgttcattgg taactttacc tggagctata tttttattcg ccacatgata 300
tgtgttttgc ttggagcgtc gtgtatgata ttagtctttg ctttttagtt tacctaata 360
tccttgctgt aacacacctt ttgggaggat cctacttggg tgaaatttat tagaatactc 420
tatgtgcttc acttatatct ttgagctag atagtttttg c 461

<210> 893
<211> 447
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-F6

<400> 893

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tattgccagc cttctgttc cgcgtccaga gggagctcac cccgataaaa caggcagcgg 120

caagtttgtt ctttcagtgg cctggagtcc agatggcaag ctcttagcat gtggatccat 180
ggatggcacg attgcggtgt atgatgcggt ccgcatgaag ttctccacc acctggaggg 240
gcaccacatg ccagtgaggt ccatggtgtt ctgcgctgtg gacccccacg tgctcttgac 300
cggatgtgac gactcccaca tccacatcta cgatgccaag gagaagggcc tgatcggggc 360
catgtcgggt catgcgagct ggggtgctgag catcgacatg agcccggatg gcatggcggt 420
ggcgacaggc tccagcgacc gcaccgt 447

<210> 894
<211> 452
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-020-Q1-E1-F7
<400> 894

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gcacaagtgt ggtaaaagga tagtaacatt gccccttctc tctttttctc tcattttttt 120
gggccttctc cttttttggc ctttctcttt ttttcgtccg gagtctcatc ccgacttggtg 180
ggggaatcat agtatccatc atccttttct cactgggaca atgctctaata atgaggatc 240
atcacacttt tatttactta caactccata ttacaactcg atgctagaac aaagatatga 300
ctctatatga atgcctccag cgggtgtactg ggatgtgcaa tgatctagcg tangaatggc 360
ataaaaacgg acaagccatg anaacatcat gctagctatc ttacgattat gcaaagcaat 420
atgacaatga atgcccaagt catatatata tg 452

<210> 895
<211> 116
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-020-Q1-E1-F9
<400> 895

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gagagaccgc cagaagaaat gtctacagaa actggagatg caatgcctgc tcctga 116

<210> 896
 <211> 438
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-020-Q1-E1-G2

 <400> 896

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 tttgcaagtc ccgtagcatt aacatatggg aaactttgtg tgacaaattt gaaccatgag 180
 gtgtttcttt attgccttca ttaggtgtgg aggtcgggat cgcgcgatgg ttaactccta 240
 ccaacccttc ncctaagagc atgcgcgtag tgcttaattt tgatggcttt tagaattttg 300
 ccataagtaa gtgagttctt tatgactaac gttgagtgca aggattatac acactctcac 360
 ctttccatca ttgctagcct cttcggtaac gtgcattgcc tttctcacct tgagaattgg 420
 cgcaaaaatt gccggtgc 438

<210> 897
 <211> 450
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-020-Q1-E1-G5

 <400> 897

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 ccttttcccc acgtgttccg gagttggaac tcgatgcacc attcagcttg cactgttaac 180
 accatttttg aagatggatg taactgacaa acaccctcc agtagttgca gccttgctgg 240
 aaggatggat tcaggtgtgc atcctgacag tcactatcac ttttgaagat tgatgatgta 300
 cctgcaaacg gcttcgttaa ttttaggaag gatggagtcg tgcattggact ggatcctaac 360
 cgactgacat gaaaacttga ggctattaca cggattcagc gttgaaacac ggctttgaag 420
 tccgacgtgt gccttatgat tttttgtggg 450

<210> 898
 <211> 437
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-G7

<400> 898

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aagagcggca agtacacgct cggctacaag accgtcctca ggaccctcag gaactccaag  120
gcaaagcttg tgatccttgc taacaactgc cctccactcc gcaagtctga gattgagtac  180
tatgctatgt tggcgaagat cactgtccac cactaccatg gaaacaatgt tgatttggga  240
actgcgtgtg gtaaataactt ccgagtctgc tgctgagta tcatcgaccc tggcgattcc  300
gacatcatca acgcaacacc agctggccag taaacctgtg catgccattt tcagtgtctc  360
gtctgatgcc attttcttgc tggacttgat ttggtcttgt gtacatcatt tatcagtcaa  420
tcaagtttga tgggact                                     437
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<210> 899
 <211> 445
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-G8

<400> 899

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ttattaatct atcatgcttc acttatatta ttttgagagt ctcttagaac aacatggtat  180
ttgctatggt tataaaattg gtcctagaat gatgggcata caagttaggt ataataaaaa  240
ctatcagagg aagtgaattg gatgctatga tcaatttgat acttgataat tgttttgaga  300
tatggaggca gtgatattag agtcatgata gttgggtgat tatgaattta aagaatgctt  360
gtgttgaagt tggcaagtca tgtagcatac acgtatggta aaagtttgtt aacaaatttg  420
aaacatgagg tgttcttaga ttgtc                                     445
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<210> 900
 <211> 421

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-020-Q1-E1-G9

 <400> 900

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 cagcaatcct tgagtacctt actgccgagg tccttgagct ggccggcaac gctagcaagg 180
 atctcaaggt gaagcgtatc acccctcgcc acctgcagct tgcgatccgt ggagatgagg 240
 agctggacac cctcatcaag ggcaccatcg ctggtggtgg tgtcatccct cacatccaca 300
 agtcactcat caacaagacc tccaaggagt gaatgaaatg caataacggg tagttgttgt 360
 gtgttgtatc ttcgtgatcc cttgttatgt tgtgctatct gttacgtggt gctattatca 420
 c 421

<210> 901
 <211> 393
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-020-Q1-E1-H2

 <400> 901

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 atgacaattg agacgagacc tgattattgc ctgnngcctc atttgcgga gatgctatct 120
 tatggatgta cccgcttaga aattggtggt cagagtacat atgaggatgt tgcacgtgac 180
 acaaacagag gccacactgt agctgctggt gctgattggt tttcattagc aaaagatgct 240
 ggttttaagg tggttgcgca catgatgcc aatttaccta atgttgagat tgagagagat 300
 atggaaagtt tcagagaatt ttttgaaaat ccaacattcc gagcagatgg tctaaagatc 360
 tatccaactc ttgtgattcg tggaactggt cct 393

<210> 902
 <211> 448
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-H3

<400> 902

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aacagagctc cggaacaagc cccaagatgg gatctcgtgg atacaggaag ttgcggcggt 180
ggaattaggt tttttggctc cctctttggg ctaatggggg tacgtaggta tatataggag 240
gaaggagaac gtcggtggag ctccgagggg cccacgaggc atggggcgcg ccagggggg 300
cgccctccaa cctcgtgacc tccctggaaa cttcttgag taagggtcaa gtctcctgga 360
tcacgttcag tgagaagatc acgttcccg acgtttcatt ccgtttggac tccgtttcat 420
attctgtttc ctgaaatac tgaaatag 448

<210> 903

<211> 324

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-H5

<400> 903

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ccgaaaccgg cgaccatggc gaacgagcag ccggcgga cctacacggt ggaggagctc 120
gtggcggtga acccctacaa ccccgacatc ctcaacgacc tcgaggtctt tgtcaacgac 180
caggtttctt ctaaaacata taacctggat gcaaattctc gccttcgacg cctttaccag 240
tttgagccag aaaggttgag cgtgcaaatt gtagcccgca tattgattaa agctctcatg 300
gcaatgccgg ccccgactt cagc 324

<210> 904

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-H6

<400> 904

cccgggtcga cggtggcgct aggtcctgg actccaacat ctggttgaga caaccagata 60

gaaaggaaaag ggggaaaaag agggagagaa gcaaccgtga gtactcatcc aaagtactcg 120
 caagcaagga actacactac atatgcatgg gtatatgagt aaagaggcat atcagtggac 180
 tgaactgcag aatgccggaa taagaggggg gataactagt cctgtcgaag actaagcttc 240
 tggacatctc catcttgcag catgtacaag agagtagatt ggagtcctcc aagtagcatc 300
 gcatagcata aacctaccg gcaatccct cctcgtcgcc ctgttagaga gcgatcaccg 360
 gggtgtatct ggcacttgga acggtgtatt ttattcagta tccagttcta gttgtcataa 420
 actcacggta caactccggg tcgt 444

<210> 905
 <211> 432
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-H7
 <400> 905

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 taaaagcaaa ggaaaaatag atcataaagg caaatatatg agaaagaaga ccagagggcc 180
 gtaggtttca ctagtggtt ctctcgagaa aaatagcaaa cggtgggtaa acaaattact 240
 gttgggtaat tgatagaact ccaaatactc gtgacaatat ccaagcaata atcattatat 300
 aggcattcacg tccaagatta gtagaccgac tctgcctgc atctactact atcactccac 360
 acatcgaccg ctatccaaca tgcaccaatt gtataaagtt catggagaaa tggattaatg 420
 caataagaac ga 432

<210> 906
 <211> 503
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-021-Q1-E1-A11
 <400> 906

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 cgcgaaatccc gcctaagatt aaggtcttcc tatggcaact atgccaagat cgccttecta 120

cctctatcaa tatagccaag cgcaatggcc ctgcttccgg tccttgcgct ttgtgtgatg 180
atgcggaaga tgctgaccac gtgttcttcc ggtgtccttt ggtgcgcttt gcttgagcgc 240
cgggtccgtga ggccgctggg gtggattagg atccacgctc acgctctgag cttgtgtcat 300
acctatcgtc gatccagggc cctctgcgcc gggcatgtg gacgtctgct tcggccatgt 360
tatgggcctt atggcatatt cgtaacaagt ttactattga gggagtgttt cccctcact 420
ccgctgatgt aatcttcaaa tgcatttat tcttgacgca gtgggcaacg ctgggaaggc 480
aacaggagtc tgatcttcat cac 503

<210> 907
<211> 497
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-021-Q1-E1-A12

<400> 907

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ggg'gcattc cagccgcacc acctgaacac caaaggccag gttgccagag ggcagggtcca 120
tggttccgg atgtcgctgt ggtatgagca cctcggcatg ctgcacaatg acttcctcaa 180
cccgggaagc cgggagtgcg tccagagggg gaacaagatg gctgacaagt actgggacct 240
ctatgccagt gatgagctga acgacgacct ccccgggcac cttctcacct acccggttgc 300
cgtgacgaag gacggcacgg tgacagagct gccgggcgcg aggtgcttcc ccgacacggc 360
tgctccggtg ctcggaatca aatccaaaca cctgccccct attctcacca catanggtgc 420
atttgacagag ttgcaatcta tacaatgcta gatgctgctt ctggatatag gatgcatttt 480
cagcagtgtg agcttgt 497

<210> 908
<211> 452
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-021-Q1-E1-A4

<400> 908

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 cgagtcgaaa gtagtgatgc tatgtgtagt tctgaaacat tgattagctc atgttgtaat 120
 tataactttaa tgaacttgta tgtctctttg gtttggacag tcgttcaatt tagatgtaat 180
 cgatgctatt tattagtagg accatgaatc gtgctattaa tttcttgctt ttctcttccg 240
 atccttttgt tgcatactta tatattgctt atgtattgtc tgttggtcgg ctagtgcata 300
 gagatgccgt cgtatgtcgt gtacaagggg aaggttcccg gagtctacga cgactgggag 360
 gagtgtcgga gacagggtca ccgtttcagc ggtaacagtt acaaagggtta caccactang 420
 gcggaggcag aatctagata caccgctat ct 452

<210> 909
 <211> 448
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-A6
 <400> 909

gtaccgggtcc agaattcccg ggtcgaccgg cgcaaggagg cgccgagtta gtcattgggcg 60
 cagtgggtgtt gaagtagtgg tgcattcgaga agaaggcgtt gtttatgaag gcatgtgtca 120
 gtgtttccag catcgagcat gcatagacgg atgatgacaa agttgacgaa gcgccgcact 180
 agccttgcca ggcacgggga tacgtcatgg acgaaggga acatcggtat tgctagcatc 240
 aagcatgtgt agatgtggga cttgcacgag ctgtacgcct tgttgaggag tcggagggcc 300
 agtagagaag aagactcaat aatgggttgcg gtgccaatca gcatggggcc gatgtcgcca 360
 ttaatagtcg gactagacga agtggtcagg gtagatgatg gcgacgctgg tgacaggctg 420
 gtgctcgatg aagatgaagg ggggttga 448

<210> 910
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-A8
 <400> 910

gtaccgggtcc agaattcccg ggtcgacttc ttctcccccg gctgcggtgg ctgccgcgct 60

ctccacccca agattgcgca gttegtctgag cggaatccgg acgtgctgtt cctgcaagtc 120
aactacgaga agcacaagtc catgtgctac agcctccatg tccatgtcct cccctttcttc 180
aggtttctaca ggggagccca gggcagggtc agcagcttca gctgcacaaa tgcaaccatc 240
aagaagttca aggacgccct cgcaaagcac tcgccggaca ggtgcagcct cggcccggcg 300
cgggggctcg aggaggcgga gctcttggct ctggcggcaa acagggacct ggaattcacc 360
tacaacgaga agccgacgct ggtgccgac gccgaggcta tccagatgga agctgcctcc 420
attggcgggc catggatgcc attggcgcg 449

<210> 911
<211> 497
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-021-Q1-E1-B10
<400> 911

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ataattgtct tatatatatta ggaacataat tgaaaaaagc cacatgatgt aacgcccga 120
ttacgcaagg gcaaaagaag cgggaagaca atgatatggc tcgctggtct ctagtttctt 180
gatgcgttgt tgcaggccgc gggagctagt ctctggggtg agcggcgatg agctctttcc 240
tgtcctcaat atgctacttg agagcgtcca cggattcctc caccagcctt ttgcgcttca 300
tgtgcagcac gacattctcg tccaaaagtt tctcgacgat gacgttggtc ctcttcaaca 360
aggtagtggt ctctctctcc tactccgcac ttccgacgat cttegccctc agcaggctgc 420
gctcggactg gagcttctca ttgctctccc ttagttgcca gatggcgcca atagcctgtt 480
caaacgaggc tttcatg 497

<210> 912
<211> 424
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-021-Q1-E1-B2
<400> 912

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 gacgcgcatg cacgaaggta cgcatacgc acccgccaca cgtgcatggc atgatgggcc 120
 atcaagtgga tgaggtgatc ctgcacctcg tcacgatcga cgcactcgtg ctctaaccag 180
 ctcgcctgac cgcccatgtc tctcacgctt cgacagaaac actatcgaca cctcgaacat 240
 cattgtggag gacactatac cgcttatgaa gctccgtgga ctcacgctca tacacgccga 300
 gcattgtact ccgctcatcc tttagctcac ggatctccac atcgttggcc tcgagcttca 360
 tatccatgcg cagggattcc tgtgtcaggc gcctcaactc agggaccgtg gtctaattggg 420
 ccaa 424

<210> 913
 <211> 404
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-B3
 <400> 913

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 tattagtttt gttttaggta taacaggagt tctataatag atattggttt gattcttttt 120
 gcacctagtt tgtatgttgt tttcctttat gttagttagt aaaaccattg ttttggatct 180
 gtaaagaaaa gtgttagtag gttaaaacta cttctttgtt gttgcttgat gtgatggaaa 240
 ccttgatttt gttttcctcg agttttcttt gattttgggtt tgagtgcctg tgtgttttcc 300
 ttcagtttgc tgatatgtca ttagtgaaat acttatttgt gctattgttt gacttgatag 360
 aatttccgga gtgcgaagct tgctatctcg agtcactagc gttt 404

<210> 914
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-B4
 <400> 914

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 ggactccccg tgtggcgtgt tgagtgattc ggctaagcaa ctagcgagta gtagtagtaa 120

actctgcata ttaggtttga ccgaagtcaa acttcctaaa gtttgaccaa gtttatagaa 180
 aaatataaac atttaccata acaaatatgt atgatgtgaa agtacattca ataatgaatc 240
 taatggtatt tatttgttat tgtatatgtt aatatttttt gttataagct ttctgagagt 300
 ttacaaaact tgactttgac caatgcta atcgcgactt aaataaaaac ggagggagta 360
 cacatttgtt ttcttagttt ttagtgaact aatcatttgt tgaaattgtg aaataaatat 420
 attaggctat tgac 434

<210> 915
 <211> 454
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-B5

<400> 915
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 tccaccccaa gattgcgcag ttcgctgagc ggaatccgga cgtgctgttc ctgcaagtca 120
 actacgagaa gcacaagtcc atgtgctaca gcctccatgt ccatgtcctc cttttcttca 180
 ggttctacag gggagcccag ggcaggggtca gcagcttcag ctgcacaaat gcaaccatca 240
 agaagttcaa ggacgccctc gcaaagcact cgccggacag gtgcagcctc ggccccggcg 300
 gggggctcga ggaggcggag ctcttggtctc tggcggcaaa cagggacctg gaattcacct 360
 acaacgagaa gccgacgtg gtgccgatcg ccgaggctat ccagatggaa gctgcctcca 420
 ttggcgcccc atggatgcca ttgcccgcg gcgc 454

<210> 916
 <211> 455
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-B7

<400> 916
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 cagacatctc aatgtattac gggcaatcaa tgggtccccg gtgtttgaaa ttcattcccg 120
 tttattgcat gggacctaag catgcaccca aggacacaaa tttgattttt cgaccaat 180

atatgcactg gagcatgtgc atgtagttca attttgaatt atgcacataa aatgcattga 240
aaactcaatt aatgcataaa aatgtccaaa cgaaccccgga aaaatcacia aaaatcacac 300
aacactcctg ttgttctatg ttgacacgat taaaaatatt tgaaagcaat aagaggccat 360
ggatattgtc tcatccacia aggtggggcg ttccgtaccg aaaaccatca tgcttgctgt 420
gagaagctcc ggtttgtgag aagtatatac tcaaa 455

<210> 917
<211> 502
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-B9

<400> 917

ggtccggaat tccgggtcga cggggatcca tgcgcgccga ggacgtggga tgcattggag 60
ggagttactt gccatcccgg taacaaaggg cttgtgatca ctcagctgga tcttgcaagt 120
caaggactga aaggcttcat tgctgatgaa ataagttatc tgacagactt ggtaagcttg 180
aacttgagct ctaattcctt gaccggaagc ttgccaccag gtttaggcca accttcactt 240
gcgacactgg atctgtcctc gaaccagttt actgggagta ttcttggcac cataggctcg 300
tctaaattac agactgttct actaaacggc aatcaacttg atgggcaagt tccagaaaga 360
ctttattcag ttggcgtgca tgggtggcgtg atagatctgt caggtaataa aggcctatgt 420
ggggtgcta cctacctgc gtgtgcatta ttctgggaga aaggaggctt gaataaaacc 480
ggcaaaattg cacttgagc ct 502

<210> 918
<211> 445
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-C1

<400> 918

ggtccgagaa taccgggtc gacggggaag tccggcccca aggagggcgg cgacaagaag 60
ggcaagaaga aggccaagaa gagcgtggag acgtacaaga tctacatctt caaggtgctg 120
aagcaggtgc accccgacat cggcatctcc tccaaggcca tgtccatcat gaactccttc 180

atcaacgaca tcttcgagaa gctcgccggc gaggccgcca agctggcgcg gtacaacaag 240
aagccaacca tcacgtcccg ggagatccag acctccgtcc gcctcgteet ccccggcgag 300
ctcgccaagc acgccgtctc cgagggcacc aaggctgtca ccaagttcac ctctcttag 360
gctgttcgtc ttcctgtgtc tcgtagttag ctgttcgggt gtgtttgtgg ccgtgttatc 420
ctgtaagaat cgcaccgcca tgttt 445

<210> 919
<211> 504
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-021-Q1-E1-C10

<400> 919

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gtccatggca gccctcacgg cactcatgac ccccttttgc atgggcgaag acaacttgct 120
agcctgtagc agtaatacta caagcgatcc tggcacttct gaagctaaga ataacaacgg 180
caggccctga cgcaacaaac acaagcgccg catcaataat gacaataccg aagacatggc 240
ggtcaacgcc agatttagcg gcactaggac cggtcagcgg aagaagccat tcaaaagaaa 300
tagagagggc tcatccagcc tggaccgaat actcgatcga ccctgccaga ttcattggccc 360
ctccgctaac ctgtctatca tactaaccga agttgttggg tctttaaaca ggccgataag 420
ttaaatactg agcataacga gaaagggtcg ccgagcgagg acgacgacga ggagcctcgt 480
caaccacaca ctggggggaca gaag 504

<210> 920
<211> 497
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-C11

<400> 920

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ggatcagtc atgcatgcta gggttgccga ctttgattg tcaagagaag aaatgcttac 120
tagaaacggg gccaacatac gtggaactta cggatatctt gatccggagt acgtgtcctc 180

acgatcattc acaaagaaga gtgatgtgta cagctacggt gttctgctat ttgaacttat 240
 tgctggcaga aaccctcaac aaggtctaata ggaatatgtt gagcttgctg caatcaacgc 300
 tgatggcaag actgggtggg aggaaattgc cgactctcgg ctagaaggcg cttttgatgt 360
 ggaggagctc aatgacatgg ctgccgccc ttacaaatgt gtaagccgtg tctcccgaaa 420
 gcgaccgtcg atgcgagatg ttgtccaggc actgatccgg gtggtgaaac acagccacag 480
 cagcaggaat catcatg 497

<210> 921
 <211> 499
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-C12

<400> 921

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 tcgcggtggt gtcgatggca gagaggcctg gcaacgtgcg catgtggtgc ccattgaaag 120
 tgcgccagac cgggtgtgtaa ccagttcaa gtattgtggc ttggatgggg catccggcat 180
 tagttgtgag gtgttgggtgc aatgtctgtt tgggtattagg cttggacatt cgtcaccctt 240
 tcatcacggg tctaggagta gcaacatgta ttgtcaagat ggtggcttca ggcttactga 300
 tgtattacct tataacgact ttatgaataa ttaataaaat ggctgcatgc atcgcccaga 360
 tgcagatgca gaggcagggg ccagggggta tctctcctt ttcaaaaata aaataaaatt 420
 aaaacctttg gtcaactcat ttgcttagtt atgtttgtct catgggaggg aaccgcgcgt 480
 gcaactggcg gttcactcg 499

<210> 922
 <211> 439
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-C2

<400> 922

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 tggccaagat ggccatagaa ttaaaagccg ccgctgatca ttgccgggtt cttgaaaagg 120

aaaaccaagt gaaggcatca gaccttgaga aggctgctac gacgagaaag gacctccgct 180
 ctgctatgag ggcaaaggag gagctgcggg aagccgggga tattgtagct gggaaatcct 240
 ttatgtttgt gaggatgttc ggagatccac ggtatgcccc tctagatcga ctatggagtt 300
 cgtaggatgt atatatggat ttggcggtga gcgctgccga tgcggccaag tatttccagg 360
 gtcagacgga ccgtgaagta gaccatctgt tttggagaca atatcattcg cccgagcgtc 420
 cgctttcatt gactgacca 439

<210> 923
 <211> 445
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-C6
 <400> 923

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 agtttatgcg ctattccgta agggaccgat tgaatccaaa agtttaatgc tatgggttaga 180
 atttattctt aatacttttc tcgtagttgc ggatgcttgt gggaggggta atcataagta 240
 ggaggcttgt tcaagtaaga acaacaccta agcaccggtc caccacata tcaaattatc 300
 aaagtagcga acaaaatcaa accaacaatg tgaaagtgac tagatgaaaa tcgcatgtac 360
 cctcaagaac actttgctta tcataagaca ccattttggc ctgtcctttg cctcaaaagg 420
 attgggatac cttgctgcac atttg 445

<210> 924
 <211> 451
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-C7
 <400> 924

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 ataattattc gactattcat tgatcttcac ttatatcttt tggagtagtt tgtcatttgc 180

tctagtgtctt cacttgtatc ttttttagagc gcgatggtag ttttattttg aagaaataga 240
tgaattctca tgcttcaactt atattatctt gagagtcata aacatcatgg taatttgctt 300
tggttatgaa tttagtccca atatgatggg catcgaagag ggatataata aaaactttca 360
tataaagtga attgaatact atgagaagtt tgatacttca taattgtttt gagatataaa 420
ggtggttaata ttagagttgt gttagttgag t 451

<210> 925
<211> 444
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-C8

<400> 925

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ggcccaaaga ttggcgggtg cggcgggaag cgttgaaagt tgattacgcc atagacatag 120
agttgtgctg cctagccttg tttcctatcc tactatcata gacctttgtc aagttattac 180
cccgccctct tgaatttgca ccttatctct gaggctgaat ggtgttaacg ttttggattg 240
tcttgatgag tttatttata atgaatgggt cttatgttgg ttcttaaaaa aaaaaaaaaa 300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360
aaaaaaaaaa aaaaaaaaaa aaaaacaaaa ggataaaaaa aaaaaaaaaa aataaataaa 420
aaaaaaaggg ggcggcccaa gggg 444

<210> 926
<211> 521
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-021-Q1-E1-C9

<400> 926

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acagatctga cgagaaaaca gcgaacgaaa aagagggcga ataaaacagc aaatttttgt 120
gaagtgggga gaggaaaatg agtggcaa at ggaaaataat gtgaattgca aggagatgag 180

atttgtgatt aggaacctgg tagatgttga tgatgtctcc cgggcaacgg caccagaaat 240
 tccttttgat gtttgcttga actacgtcgg tatttcccca aagaggaagg gatgatgcat 300
 cacaacaacg gtaggtatct cctcagtga tgagaccaag gttatcgaac cagtagaaga 360
 accacacaac accacataaa cagctcctgc atacaaagaa caaatacttg caacccgacg 420
 taagagaggg gttgtcaatc cctcacgggt aaaaagatag ataaaattgt agtagattgg 480
 ataaatagat ctgcgaggaa cgtgagataa aataaataac a 521

<210> 927
 <211> 449
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-D1

<400> 927
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 taagtctgtc caaatcatgt tagcaattgc cgcattttat gattatgaaa tttggcaaatt 180
 ggatgttaaa actgcattcc tgaatgggtt tctggaagaa gagttgtata tgatgcaacc 240
 agaaggtttt atcgatccaa agggagctaa caaagtatgc aagctccagc gatccattta 300
 tggactggtg caagcatctc ggagttggaa taaacgtttt gatagtgtga tcaaagcatt 360
 tgggtttata cagacttttg gagaagcctg tatttacaag aaagtgagtg ggagctctgt 420
 agcatttctg agattatatg tggatgaca 449

<210> 928
 <211> 508
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all 'n locations
 <223> Clone ID: LIB103-021-Q1-E1-D10

<400> 928
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 ggaggagtgc gatgggagga gttagggttt ggttggtcgg gctgcgggtg ggggtggggg 120
 ttaccctttt tcttttcttt tttctttttt ctgaagatag atggatggat ggacgtggga 180

tggagagatg gatggatgga tggggccatg tcatcgatcc gtgtgacagc taattccacc 240
 aatgagaata gagcacgtgt aaatatgttt ttcctttagt ttttttctaa tttttcatat 300
 gaaaaattca aaaaatgatc tcatattata cacaggggtg cattttgtaa tggcaaacag 360
 tgttgcctaa ggaagttttt attttctatc cacgaaaaat tcatttccca tttttcgagt 420
 gcccaaagtg agtttttttg tgaaggggac tacatacatt tgttgcaaatt ttgtacacaa 480
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<210> 929
 <211> 438
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-021-Q1-E1-D4
 <400> 929

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 ttcgtctact tcccggctgt cctgagctgg agaattgctg ctactgttta tgtgtttgca 180
 aatttttgaa aacaagcttc agtacaagaa aaatgggtgg tcagtccagc tcctgcaacc 240
 aacacaggtc gttgcccttt ttgccacaac ggtagcagca caaacattag tgtggtcac 300
 ctcaaccagt ttctcacgag gctccccgc aagccctgct catgatcagg ataacctoga 360
 taggttacac atgttgetca cgaagctgat aggttcacac tgttgccagc gagtataccc 420
 gtatggagcg gagatgac 438

<210> 930
 <211> 376
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-021-Q1-E1-D7
 <400> 930

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 caacgtggac tgctgaagat ttgcttgagg actacagaca atacaaccaa cacagcagag 180

atcgccaagg catatggcgg aggtggaaag gcgagctcaa gttctttcgc actaaggatg 240
gacgagttca acgcctggat tagggagaac acatgaaccg gcctggaatg ctggatggca 300
atctggtgta tcatatcgta acatgcgtgc atgcctagtt gcgaggaaga tgtgaaaaat 360
gagcagctga tgttgg 376

<210> 931
<211> 457
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-D8

<400> 931

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aaacatgtcc gacgcttggg agacatgacc gtgcattgtc cgggggctga actaaactgc 120
gaggagattg gtcattatga ttcattggctt gaggatcttc atactgtcaa gacaaattat 180
tttcctggac ttaaaaaatct tagtactcaa aacgtgcgac cgatagtgtt cgtattgaac 240
tatggtcaca tctatttagg aaagatggta aaatgtttaa tatttggtccg cagtgcattc 300
tttgcataca ttatttttta agctaaactt cattgctaag tatgttaata tacgatgttc 360
ttcaacaggg actcccgatg aatgttgtgc ctcattggat cgagactaaa ggtcgcatga 420
gaatggttaa cttacgacca agatataccta caatgca 457

<210> 932
<211> 505
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-021-Q1-E1-D9

<400> 932

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gggggtgctta actcgtgggc gtcgaacctg gagaagctgc tggacctggt ggagaagagc 120
tgccacaaaa tacacaagga gacgatgatc cacaaggcgg tgctgaaagc ctgaagtga 180
ccattttgaa ttgaatgtgg ctttgtttag gttgtgtgcg tagtagactt tctctatgga 240

tctgaattca ctttctactgt atgggtaaaa ctattctctc tgctcaggtg ggcacgcct 300
 gtttgccttg ggaactcgtg tgccaaccgg tctcgaaata ctgtaaccac aggggaatgac 360
 gaatgctatt tgctgtattt ttctgaacat tagttgtatt ctttggcatc aactcttgct 420
 gaacctggat gtatctgctc atcagagcgt agagccagtt tctgaatgat ttgctgggag 480
 acgcgcttgt tccgttttga gtggt 505

<210> 933
 <211> 457
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-E1
 <400> 933

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 cacatatgag acattgaaca acattgagag attgataaat ggaatatcag cactcttggt 120
 gacactgtta cctggaaaag ccaacatttt ggaaggggtc agtggctggg aacttaggcc 180
 agcatttcgc gggccacgtc ttcctcggtg gatggaaagt ggggtctctt catttaacga 240
 gttcattcac gaactttctg ccgattcgga gtctgaatca attgctggct ctgtccctgg 300
 ggatgatgac aatgaagagt ttgtctgcc tcttctccg ttgtcccaa gttcacgatt 360
 gtcacacaca agcagctttg gtagacatga ccgtcgattg agaaggccta tcaaatatgc 420
 agtttctctg attaattggg ctgtgaaaaa tttccct 457

<210> 934
 <211> 506
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-021-Q1-E1-E10
 <400> 934

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 aacgcaaagc taccaaagca ggttctgtct actgaggagc agaagtggct cattgagccc 120
 acgggaaaag agtaagtggg tcattatttt gcttgtcaca tgcttattcc gggtgttatt 180
 tattttgctt gtcacatgct aatagttcat tcttttgcag caactggata tattctaaag 240

gggtccgtat tcccaacggc ctcatcaccg tcttgctgaa gttatattgg ccgggggttg 300
 actgtcctga tccagtcagg cagccggacc gtcaggtttt ggtcacgagc tgggaccact 360
 gggaagcggc ccgccacgcg gaccatgaga cccatgcca ggccgtgatc actactttct 420
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 cttcttccat tctgtttca tgcattg 506

<210> 935
 <211> 505
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-E11

<400> 935

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 aataaacttt atatgtaaat ggggtagaaa atgcctagtt taacatggtg cactttattt 120
 tcttgtttaa caacaataaa atgtggttta gggcagaaca ttaccaaatt gataatatgc 180
 atatggggat tttccggaat tggtgtttgt ccccgccctc atttaaactt gactagatag 240
 ttagtttact tatgcttcac ctcttgccat gtttaataac attgaatatt gttgagtgc 300
 taaacaggag aggactaaat aagtcattgt gtgtttcgtc aatatgcaac tcgttgcata 360
 ttgagctcca cttaacttgt agttttgttt gtgcactttg ccatgccatg tttcattaaa 420
 tcaggcatgg atcatacttg gttgtgcac atgccatgtt tatgtgatgg ttgtttacta 480
 tgttgcttgc ttcctttcgg gttgc 505

<210> 936
 <211> 486
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-021-Q1-E1-E12

<400> 936

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 gctogaagaa tattatgttc gagtaaagtg taccataatt gtaacaacaa tattatgata 120

tgtttaaggc tatgttttta tacttctccc cgaaaagttt cggtcgtcgg cttcagcccc 180
 ctccgcgtata acacgggggt gtttggaata gcacttgatc acacttgacc caacgtcttg 240
 gtccgttaag gaggtgtag tgccggcaaac taggcaatcg aactatagag ctttaacact 300
 ttcacttagc catatgagtt tgacagtggg gctactatat agcccctggg atgtccgtgg 360
 ttattcaaata acggtgcgta tacatacgtg accagaagga cggtccttcg ctttaacacga 420
 agggaaatcg gaagattctg atgagtcacg gagtgggtga ctagctctca ccgcatcatg 480
 acagtc 486

<210> 937
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-E2

<400> 937

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 aatattgatg aaactgaata tgatcttctt ttacctagaa ggcgttctaa aaattcggag 120
 tatttagatc ttaatgatga aattgatgaa agtggaattg aaagaaataa aaatctagat 180
 gttgctaaac ccactatatt ggatttcaag gaatttaatt atgaaagttg ctctttaatt 240
 gattgtatct cttgttgca atccatgcta aattttccac atgcttatag tcaaaataaa 300
 gccttcaccg aacatattgt tgatgccttg atgtaatctt atgaagaaaa acttgagttg 360
 aaagtttcta tccctagaaa actctatgat gagtgggaac caactattaa aattaaaatt 420
 aaagatcatg agttttatgc tttgtg 446

<210> 938
 <211> 437
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-E5

<400> 938

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ttggctcact tttgatgaga agctcctttg ttgaacatac cgtgatatgg gatcggattg 180
gcggaaaaaa attcaccaga actctgtaga ttattgaaga gccctagaac agcattgtat 240
ggaatcggtt caggcagtca tgttgtctct gaatcccagt gtaattttga tagaacatct 300
tagcatacca gttgttggca gaacatgttc agtatgcttg acatgtaact attggatatt 360
attctcttat gtcgattcaa taaaatgttt taacatgaaa aaaaaaaaaa aaaaaaaaaa 420
aaaaaagcgg ccgctct 437

<210> 939
<211> 204
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-E6

<400> 939
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa accaaaaaaa aaaaaaaaaa aaaaaaaaaa 120
aaagcggccg ccctaaaggt tcaaagctta cttaccctgt catgcaacgt catacccctt 180
caatagtgtc accaaaattc aatt 204

<210> 940
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-E7

<400> 940
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catacttatt gtatgcgggt aatgatggaa aaggttcccg atggtgattg gttttgtgaa 120
gagtgcctaa ctgaagtaga atttgaaaag gagaagttag aaaaacctca ggtgaagctt 180
gtcacttcaa aggaagaatc tgttcaaggg aaaattagta aacctttcaa tgatgcaaac 240
agcagaagtc cttgtgagaa tgaagtggag gatgaaactg ttggcagaaa agaacggaat 300
gaagcaaattc aaggcattga tatggttgaa gatgcaaaga ttccgcctgt ggctaaacaa 360
aatattcctg aaccgggtgg tttatcaatg gagtcttact ccagaaaagg aatacctctg 420

ctatgcg

427

<210> 941
<211> 454
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-E8

<400> 941

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gaatgcattg tggagtagtt attagatgat tgattgcgag agtgacagaa gcttaaacc 120
tagtttatgg gctacttcgt aagggattga tttggatcca aaagtttaat gctatgggta 180
gattttatct taatactttt gtcgtagttg aagatgcttg tgaggggggtt aatcataagt 240
aggagggtttc ttcaagtaag aacaacacct aagcatcggg ccacccacct atcatattat 300
taaagtagca aaccgaatc aaaccaacat gatgaaagt actagatgaa attcccggtg 360
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ggattggggc accttgctac acttttggtta ccgt 454

<210> 942
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-F1

<400> 942

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tttttttggt tttgctcctg tttagtaata aatcttgcct ctacctctg tttatatgtg 120
tttttatctt ttaattactg tttgtgcca gtagaaccta taggataagc tacgatgata 180
gttgatttga ttctgctaaa aaacagaaac tttgcacgca cgaatataat ttttttaa 240
cacaggaacg tgattttgca ttgattcttt ttgctgctgt tcaataaaca aattgtccag 300
gacctcctat ttttctagga tttttagagt ttcaaaagt tgcgttaggt acagattgct 360
acagactgtt ctgtttttga cagattctgt ttttcgtgtg ttgtttgctt atttcaatgc 420
attt 424

<210> 943
 <211> 407
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-F2

<400> 943

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ggaaagcggc agcgatgcct cttccattaa ccgcgtgctc tccagctccg gcatagaccc 120
ctacatcaga aacctcatgg tgctcggact cggcttccgg cgctcccggg ccaacatcaa 180
gcaggcgctc aagcggcacg acgatgacag cgaatggtgg atgtgccctg ccattccatt 240
gaaggacatt atgccggtgc ctccccatc gatggaacca ccgccaccgg tggagaagaa 300
gaatatggat acgaacatga atgcgctgac ggatatcgcc gctggggccat gcattacatg 360
tgttaatgat gaacttcctg accctgctta tggcgatgat ggaattt 407
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<210> 944
 <211> 452
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-F6

<400> 944

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ggaaacttta atgctagacc gttccctagt aattcctcta ataattatgg aaattcctac 180
aataattctt atggtaatth taataagatg ccctctgatt ttgataatag tgtgaaacaa 240
tttatgattt ctcaaaagaa ttttaatgcc ttgcttgaag aaaaattgct caaagttgat 300
gatttggtta ggaacgttga tagaatttcg cttgattttg attatcttaa acttagaact 360
tctcctcta agcatgatat caatgagtct ctcaaagcaa tgagaatttc cattgatgag 420
tgcatagaaa gaaccgctag attgcgtgct aa 452
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<210> 945
 <211> 433
 <212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-021-Q1-E1-F7

<400> 945

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gaggaaatct cggaaggaga ggagtatgac aacccaagg ccagtgacgc caagaagaaa 120

caaataggcg aggggtgagga gaatggcgag gatgatgagg aagaacaaga ggagcaggag 180

ggtggaggag gtgacgacga tgatgatgac gacgacaacg acgatgacaa tgaggacgac 240

gacgatgatg acgatgatgt cgctgctgaa gacgatggag atggagtaga agaggaggat 300

gatgacgatg aggaggagga cgatgaggac ttgctccagc ccccgagaa gaggaagaag 360

tgaagccctt cgacgcggt gctttagtca ccatgcgacg agatgtgcct gtccttcact 420

gtgttctgga aac 433

<210> 946

<211> 397

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-021-Q1-E1-F8

<400> 946

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ttgtatcgcg acctgaatga atgaaataaa cgaaataacg ctcttggttca aaaaaaaaaa 120

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180

aaaaaaaaaa aaaaaaaaaa aagcgccgc caaaaggat caaacctaac gtacccttga 240

atgaaacttc aaaccctcc aaaagtgtca caaaattaa attaacgggc cgtcgtttta 300

aaatatacta actggaaaaa cctgccttt acccaactaa accactttga aaaaaatccc 360

catttctcaa cctggctaaa aatcaaaaag gcccaaa 397

<210> 947

<211> 497

<212> DNA

<213> *Triticum aestivum*

<223> unsure at all n locations

<223> Clone ID: LIB103-021-Q1-E1-F9

<223> Clone ID: LIB103-021-Q1-E1-G6

<400> 949

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tcgactcacc agtcgaagtg atgactgggt caccaagtga aatgatgaat gtaaactctat 180
cctgcactgc aagtttaact gtctatcctg cactgcatct ttaactggcc agttgtatga 240
ttcctggctt gtcttgtgtg agagcactct atatatgatg agggttctat gttcgggtgga 300
atctacttgt gatgagaatc taagttctgt gatggcatgt gagatgtaag agcactcata 360
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<210> 950

<211> 420

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-021-Q1-E1-G8

<400> 950

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tacagtacct tgaagtgggtg ttttgttttc tttcgctaac ggagctcag agattttctg 180
ttgagttttg tgttggaag ttttcaagtt ttgggttaaag atttgatgga ttatagaaca 240
aggagtggca agatcctaag cttgaggatg cccatggcac cccaagataa tctaaggaca 300
ccaaaaatcc aaagcttggg gatgccccgg aaggcatccc ctctttcgtc ttcgtccatc 360
ggtaacttta tttggagcta tatttttatt caccacatgg tatgtgtttt gcttggagag 420

<210> 951

<211> 473

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-021-Q1-E1-G9

<400> 951

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 tacgagaagc acaagtccat gtgctacagc ctccatgtcc atgtcctccc tttcttcagg 180
 ttctacaggg gagcccaggg cagggtcagc agcttcagct gcacaaatgc aaccatcaag 240
 aagttcaagg acgccctcgc aaagcacccg ccggacaggt gcagcctcgg cccggcgagg 300
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 aacgagaagc cgacgctggg gccgatcgcc gaggtatcc agatggaagc tgctccatt 420
 ggcggcccat ggatgccatt gccgcggcc gcgacgcagc cgctcactct ggg 473

<210> 952
 <211> 484
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-H10
 <400> 952

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 gcttggtgtt agagatatta ttatttactg cttgtagcct acctgggata ccatcatatt 180
 ttgctgatta tggaacagct tttatcctgc ttaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
 aagacagaaa gcaaaaagaa taaaaaaaaa aaaaaaaaaat aaaaaaaaaa tcaaaacccc 300
 caaaacaaaa acaacgaaaa aaaaaaaaaa aagggggcgc ccaaagggt tcaaacttta 360
 tttcccctgg agggaaattt aaaccccctc caagggggcc ccaaattta attcaagggg 420
 gcttttttta aaaaatgcgg acggggaaaa ccctgtgttt acccaattta acccccttgg 480
 aaaa 484

<210> 953
 <211> 482
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-021-Q1-E1-H12
 <400> 953

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 caacctttta gcacgtcata ttttaatgag tgctcacaat taaaaaaggt ttccaagata 180
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 caaaactatg ttagtcaact ctcaacaact tttattcatc atactgttta tatgtgaagt 300
 cactactctc cataagatca atatgatctt tttatttctt tttattctct ctttaatacc 360
 ctcaagatca tagcaagata gcaaagccct caactcaaaa ctactcttta ttatataact 420
 cacggactcg attacataga tagagataaa acaaaactca aagctagatc atactaaaac 480
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<210> 954
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-H5
 <400> 954

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 tctgtaagat tacgtgttga tgtatcaatc aaattggatt gaatacaatt ttttattcgg 180
 tatcgccttt attcatagac tatgttctgt cttttcagtt gtctcatgca aacacctcgg 240
 cacaaattgc taggggctct atatggcaac ataggatttg ccaaacaaaa gtccgaacaa 300
 cttttcagca caattcggca tcccagactt ggcaactatat gcaccacctc tgaatcatgt 360
 ctttggtcaa tagttggggt gcccggtcc tgtgtttgct accttacgtt ccgtctgtcg 420
 gctatggt 428

<210> 955
 <211> 371
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-H6
 <400> 955

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 gcgtaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120
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 cttacccttg aaggcaacgt aaaaccctt caaaagggtc accaaaattc aattaacggg 240
 ccgtcgttta aaaacgtctt aacgggaaaa accctgggggt aaccaaatta aaccgccttg 300
 aaaaaaatcc ccctttcgca agcaggggta aaagcaaaaa ggcccaaacc gttggccctt 360
 ccaaaaattt g 371

<210> 956
 <211> 448
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-H7
 <400> 956

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 tagaaagctc ttagatgatg aaaagaaacc cgatcacg aaacgaccac acactcctat 120
 tggagatgag gtggaatgca agaagccaaa gatagcagaa ggctcaaggt gccaaaggaga 180
 agaacctgag gctggaggga taaagaattc ctctgggtc tgatgacagg ggaatgcagt 240
 aaacaccaga agcatcaaaa ctatgatctg gaacagtatc ctgaataaac tattttctgg 300
 attatgaatg aattctgaag catggggcta taagtgaatt atgtaacatg gatttgtaac 360
 tatgggtgat gttaagttaa cgttctatca gtgcatcgtg aatgcgtgct gaatatgctt 420
 ctgttatggt ttcgtaactt cgagactg 448

<210> 957
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-021-Q1-E1-H8
 <400> 957

gacgggggtcc actatgggtg agccactctt aggcacatct tcacaagtcc attgacacca 60

caatggatgg caagattcaa gcatgtgac tcttcgtgat gctccatgtc ggtgtcaaaa 120
 ccggcgatc tcgggtaggg ggtcccgaac tgtgcgtcta ggcggtatgg aacaggagac 180
 aagggaacac atgttttacc caggttcggg cctctctgat ggaggtaaaa cctacatcc 240
 tgcttgattg atattgatga tgtggatggt acaagagttg atctaccacg agatcggaga 300
 ggctaaaccc tagaagctag cctatggtat gattgtatgt tgtcctatgg acgaaaaccc 360
 tccggtttat atagacaccg gaggggagaa aaattntca tntttttaag 410

<210> 958
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-A1

<400> 958

taccggtcta gaattcacgg gccgacgggg accgaagcca acgaccgagc gaaccctaga 60
 ctccgagcgc acgaggagag agagatggag atctccatgt cgcggtcatg gcgatgcgcg 120
 cgctgtacaa cgagatccgc gcgaggaatg tgcgcgatgt gccggcgtag ctcaaaccgc 180
 gcctcacctg ggagaacgtg atagaagagc accgaccatg cgggtggaccg ctacatcgag 240
 aagtacatcg agaccagctc ggttgaccgc ctcttcacg tctgcttcgg cggcatgggc 300
 ttcgcctacc tcgtgggcct gcccaggag cgcgcacc tgcagcacct cgagaagcac 360
 ggcgccact agatccgat tcgcctcgcg caggagagct tatctacggt tgat 414

<210> 959
 <211> 433
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-A10

<400> 959

ttcgcggtc gacggggagc tgaaactgct ggtcttttac ttcgagaatt ggaactgcaa 60
 cctccttctg aaaaatggca tagacgcaac atgtttggag gaccctggc agaaccagat 120
 gatctcggtc gcattggata atatgccaca tctgaaaata ggtggtcata tcaaccctca 180
 cttgtctgac atggaagagg agggtaaaac taactttggg attcaaagtc tttggccaag 240

aaagcgccgg ttgtctgaaa gagatgcagc atttggctctg aaaacatctg taggtcatgg 300
agcttatctt ggcgtgatgg ggtctcgacg agatgtcatc acagccgtgt ggaaaacaag 360
acttgatggg gaatgggtata agtgcatacg atgtctgcgg caaacttgtg catttgcaca 420
gcctgggtgcc cca 433

<210> 960
<211> 440
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-022-Q1-E1-A12
<400> 960

gtacgggtcca gaattcccgg gtcgacgcca ccacggaagg ccgggtggcc gactggatct 60
atgccatctc catgggcctc gccacgggca tctttgtcta cgtctccatc aaccacctcc 120
tcgccaaggg gtacatgcta cagaggcccc tcgccgccga caccgccgtc ggccgggtggc 180
tctccgtcgt gcttggcgtc ggtgtcatcg cagtcgtcat gatatggaac gcctgatcct 240
gaattcgtga ttcattgagaa ctagaagcat ttagctatgg atgtaagcct attgtgctgc 300
tataagtttc tgctagttag acaccagatt tgcagtacca gctgatcaaa tgaagcagct 360
aatgacagat aaacataagc actaaatccc tggttgtttc aatacgcatt tagtgtgtgt 420
gtatatatat atatatcaac 440

<210> 961
<211> 277
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-022-Q1-E1-A2
<400> 961

gtcaagaatt cacgggccga cgggttgat agcatgcaac cactgacatc gcataagttt 60
ggcgaacgct ttaaaaaatat atttaaatac gctgtagtgc aaaactgcc actgaaccag 120
atttgaaaat caggtgtaaa actcaaaata tgcattgaat gaaatatgtt ttgcataaca 180
gtgatttaga aacctcacat gacatctcca gattttggtt gaaatttgta gataaattta 240
tcaaagtctg gtacttcata aagagctcca aaactaa 277

<210> 962
 <211> 414
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-022-Q1-E1-A6

 <400> 962

attccccgggc cgacgggggat actatcttct tttgtttcag gtattgccgg aacaagttta 60
 ttcaattcag ttagtttaat ggcctataat gtcttctaca caagcattcc tgttttaact 120
 actgttctgg acaaggattt atctgaaaag acagtgcac aaaaccaga aatcttacta 180
 tactgccagg ctggaaggct tttgaatcca agtacttttg ctgggttggtt tggtcgatcg 240
 ttatatcatg caattgttgt tttcttaatc accattcatg cttatgccaa tgaaaaaagt 300
 gagatggagg agttgtcaat ggttgctctc tcatgaagta tttggttgca ggcttttgctc 360
 gtgacactgg agatgagttc tttcactttt ctgcagtttc tggcaatatg ggga 414

<210> 963
 <211> 425
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-022-Q1-E1-A8

 <400> 963

gtaacgggtca ggaattcccc ggccgacggg acgaccaggg actgtgttca tgtggatttc 60
 agttgcttgt ttgacaaggg tttgcagctt gagaagcctg aggtggtgcc attcaggctt 120
 acacaaaaca tgatcgatgg gttgggcatc gctgggtacg aaggcgtctt tctgaaggctc 180
 tgcgagatca ctctgtcggg cctcaggggc cacaaggagg cgctcatgac ggtcctcgag 240
 accttcatcc acgaccact agtggagtgg accaaagccc acaagtccag cggaggggag 300
 gtccgaaatc cgcaagcgca gagagccatc gccaacatca cggcgaggct ccagggcgctc 360
 gtggtggggc tcaacgcgcg tccctccctg ccgctctccg ttgaaaggca tgcgcggcgg 420
 ctgat 425

<210> 964
 <211> 415
 <212> DNA

<400> 966

cgggctctag atggatggcg aggaaggatt tgaggaggcc gcctgccttc caggatttat 60

tagttgtctc tcattatgat gttccccctt ttgtgatcag aaacttgaca agttagttac 120

tgtgtgtaga agaacaacat caccgtggga tccttggaa gcctttggaa tccaattttt 180

aacggaaagg aacttttaaa tcgttaaacy agcaaaaaat taiaaaaaaa aiaaaaaaaa 240

aaaaaaaaa aiaaaaaaaa aiaaagaaac aiaaaattaa aiaaaaaaaa aiaaaggggc 300

cgctcaaggg gttcaaactt tacttaccac ttaaaggcga cctcaaaact cttca 355

<210> 967

<211> 458

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-022-Q1-E1-B2

<400> 967

cgctgcaggt gacgggtcaag aattaccggg tcgacgggat acaggcgggg aaggtaccgg 60

tgccgatgcc gctactgaaa agaagaagca gaagaagtag aggatacgaa aacctaacta 120

actcggcatt ggacgactgg tgatcacaaa gatgacacct ggcaagtttg agccatttga 180

gccggaacaa cctcgcaagt gctatgggaa ccaagtagga tgcacacctac aggaatgcac 240

gagcatcaac gatgatgact taaggagtca agaacatttg aggcagttgc tctgacgaa 300

gttgtacaag agattcaagt tccccgacag ggatgataac atagaacaac catgggatga 360

tccgaagatg aiaaagatta acaatcacgc catgggcatg ttcagcaatg atttggcctc 420

ctggaaagag agggtanaca agctattgag gccgaaga 458

<210> 968

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-B6

<400> 968

gtcaggaatt cccgggtcga cgggggtgca cacactggtt aaggagtctc caccagagaa 60

gcaagccacc acagctgaat ccatcaacaa ctctgtcaga ccttcacctc aaatgcattc 120

cgggtgtaagt aatggtgaag gctccggtgc gagcacgcag ctgaaccgac acgaccaagc 180
 cgcagtcatt ggagcgctgc tcgagcagat gcagcttgac gagcagatcg gtagtctagc 240
 aacatagacg aacaaccaac cgagcccggg ggctggtgcg agaagaagtt accatttggt 300
 agctaaagaa gaattgcaag tatttttttg attttctgtt cattgaggtg gtcagtcaac 360
 aagccaaaag gatggatgaa tagctgaagg cggtgattca gggattgggt ttcgttaaat 420
 ttttggg 427

<210> 969
 <211> 445
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-B7

<400> 969

ggtcaggaat tcccggctcg acgtagctcc ttgagaaaga tgccgaaact catgtataga 60
 tcaacactcc aatcatcaat gctccaagca tcataccgga gattgactag taggatcaca 120
 aaagtgatgc atctgtacat gaatttgact acatttcctg aaaaaatacc cagaagaggt 180
 tgagttaaca atatgtgagt ttgaaaatgt tgttcatatt ttactagtac tatttgggta 240
 gggatatagac tagacaagca taagtggagg tgaattagat gtctgaataa aaattgtcga 300
 taacatgtag atgaactgca cagacatcaa aaatcttatt gctcccatca atatccggca 360
 gattagacta tagttattaa gctataaatt tgtattttct actccagctg ccatagaaaa 420
 cccaagttga atcaacattg caatt 445

<210> 970
 <211> 439
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-C11

<400> 970

tacgggtccag aattcccggg tcgacggggg ccgccgacac cagcttctct tcctcctccc 60
 gcagcgctc ctcgaatcca agagatcaag tcgctgttgt tgtgccactc cccctccagc 120
 cgccgtcatg cagaacgagg tgggtgacat ggtggacctc tacgtcccca ggaagtgtc 180

ggccaccaac aggatcatca cggccaagga ccacgcctct gtccagatca acattggtca 240
 cgttgatgag aatggcctct atgatggcgg cttcaccacc tttgctctct ctgggttcgt 300
 ccgtgctcag ggtgatgctg atggctccct ggacaggctg tggcagaaga ggaaggctga 360
 gatcaagcag ctctagatgt tgctagtagt tttacctgga acttggtgtcc ttcccatgtc 420
 tacctagctc ttggatgtc 439

<210> 971
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-C12
 <400> 971

taccggtcca gaattcccg gtcgacgggg atgatgatcc aggtctccaa gaagagcaag 60
 gaggagtttc tcagttaggc ctgacagcgg tagctgttgg ttgcogtgac ctggagtaca 120
 tagctgccta tgtatctgat atcaccaacg gcgctctcga atccatoggg accttctgca 180
 aaaatctcta cgacttcogg cttgtcctgc tcgacagaca aaagcaggta accgatctgc 240
 cgctcgacaa cgggtgttoga gctctgttaa ggagctgcac caagctcogg agatttgctc 300
 tctacctgag acctggaggg ctctcagaca caggcctcga ctacatoggg cattacagcg 360
 gcaacatcca gtacatgcta ctgggcaatg tcggcgattc ggaccacggg ttgatccgct 420
 t 421

<210> 972
 <211> 448
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-C3
 <400> 972

cggtcaggaa ttcacgggtc gacggggttg atcttggtgt tgcaaatatg tagatctagc 60
 attcaggatt ttaacataga ttatcaacta accataatca tgataacatt tatgtctcaa 120
 attcactcat atcaatggca taattaacta gcgagcaata ataatgaatc tcagatgaca 180
 acattttttt caaaataatc atgatacaat atgatataat ggtatctcgc tagccctttc 240

tgataccgca aaacatacat acatagcacc cgtgaagatc aaggactgac tagacattat 300
aattcatggt atatgagatc cagtcacact cataactcaat atcaattaat aacaatgcat 360
acagatgata gtagtgctct ctaatcgggtg ctttttataa gagcatgatg acttagcaat 420
acacgtaaat agatacgccc ttcgcaga 448

<210> 973
<211> 414
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-022-Q1-E1-C4
<400> 973

ggtctagaat taccgggtcg acgggtttga tagtgtagt gcagatatgt agatctagca 60
ttcaggattt taacatggat tatcaactaa ccatattcaa aataccattt aggtctcaca 120
ttcactcata tcaatggcat aattaactag cgagcaataa taatgaatct cagatgacaa 180
catttttttc aaaagaatca tgatacagta tgatataatg gtatctcgct agccctttct 240
gagaccgcaa aacataaata catagcaccg gtgaagatca aggactgact agacattata 300
attcatggta taagagatcc agtcacactc atactcaata tcaattaata gcagtgcata 360
caaatgatag tagtgctctc taaccgggtg tttttataag agcatgatga ctta 414

<210> 974
<211> 441
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-022-Q1-E1-C5
<400> 974

ggtcaggaat tcccgggtcg acggggagga ggagcatgat tggatgatgac gtggagtatt 60
gctaccaccg tcatgttttag gtgtcctctc tactcttttg gtgtcccgat gccaaaggag 120
gagagagtgt acggatttgc ggtgtgttgt gagttgagtg tgtttctctt tttgcagttg 180
ctttcctcgc tcgaactcgt ttgcttttgt ttgtgtttga gaccatatgg ggtgagacat 240
atgagctaag ctatccattt ctatctatgt caagtacttt atgttaagta atcggtttgtg 300
agatatatct tgtgatgct ctcattcata tgctcacata gtttctcttg catgctttca 360

tcttactatc tatgcaagta cggtttggtc tataaaatat aggggggggtg gatcctatat 420
gtgtgcattt tgcattccaa a 441

<210> 975
<211> 445
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-C6

<400> 975

ggtaacggtc aggaattccc gggtcgacgg gtctgatggt atcctaagta tgcataaaga 60
aatgaaagca agtcacatcc atccgtggag tcaacaatct ggtcgatgcg cggcaagggga 120
aatgggtctt tgggacaagc tttattgaca tcggtaaagt ctatacatag cctccatttc 180
gcgtttgctt tgcgcacgac tacacggttg gccaacacag tatgatggag cactcctctg 240
acaaagcctg ctgcttccaa tttcttgatt tcttctgcga tgaattcttg gtgctccact 300
gcctgcttcc aaactttctg cttgacgggc cgcgcatgag gacagatggc aacatggtgc 360
tcgattactt tcatgagaac accgggggatg tcagacagtt gccacgcaaa tacatcgacg 420
atcgcccgca tgaaagcaac gagcg 445

<210> 976
<211> 457
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-022-Q1-E1-C7

<400> 976

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gcttctcagc ctttttcatt tgtagatgtc tgtactcaga catgttaagc ttccgcttgt 120
gctttgactt gtatgctctg aatggtgggt tgtgagacc ttgtttgtaa tatctcgctc 180
ctcggagcct aatgaataaa tacttgagtt gtagagtcac gttgtgatgc catgttgtat 240
ttgcacatat cgagcatatt gtgtgtatgt tattgaaatg cttggtatgt gtgggatctg 300
actatctagt tgtttatcct tagtagcctc tcttaccggg aaatgtctcc taatgcttcc 360

actgagccat ggtagcttgc tactgctccg gaacacttaa gctggccggc atgtgtcctt 420
cttcgttcac gtgtatgtcn ctttggggaa atgtcac 457

<210> 977
<211> 435
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-C8

<400> 977

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ttagtgctcg cattcctgaa tgatttataa cttctccttg tgccacgtgg tgccttcca 120
atgccgcata caacctgtag tccggccacg gatgatcttc ccgcttcata gagcgggtcc 180
ttggctccgt cggatatgga ttcccttccg accgcctcga cccctcatga cgctaatac 240
gcctatgtgg gatcctaaga tgggaccac cgggaggatg aggctccgga ggtgccgcaa 300
ggcaacctcc cagacttcgc accggactcc gcaccggaat ccgcagtggg tccggagtcc 360
ggcaagcggc cccttcgtaa gaagggaag actgtgacac cggcggccac cgtccaaccg 420
gtggcgccgg ataac 435

<210> 978
<211> 446
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-C9

<400> 978

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attcaccttc aaattcgtcc ggagcggtga gttacggacg aaacaatctg acgttgacgc 120
agaatccgag tcaaactaca agcccaaagg tggtgcatca cctccacttg ggcccatgag 180
acttgtagca cctaggggta gttttagggt gccttgggtc ttctccacac ctcttgggc 240
accacccctt gctcctatat aagtagatcc atctagtagc ttttccttgg gatttggtta 300
gttaaaagtt agccattgca acttcgtgta cttcgtttgt gtccaacgac cagaccaaga 360
ccgcttcggg atccccacca ttatcaatac ttcatatata tttgcaatat tcagattgct 420

ttatcatatt cttgctcgtt cttcga

446

<210> 979

<211> 450

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-D1

<400> 979

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ttatagaatt caatagttaa aatcattggt gaattccaag atgtatacga ggtctatagt 120
acttcacaat atgtcaaac tcacataatc ccagtcaaat gaaaatctaa atgcgtttca 180
tagttattac tttataggat gcaacaaaac caactataac tctacatgat ccattataaa 240
agcaatattt tgaacacatc acaatgtgtg aatgaaatgt ggagagagag cttgcaaaga 300
tggagcagat agggcgagaa agattgcatg tatgcgggag agagagtagg agacaaacct 360
aataagagag agaggggggg agaagttagg tctatgagaa agatggagac atgtaatata 420
cgtgagatgc atgtgcattc ggattttgta 450

<210> 980

<211> 393

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-D10

<400> 980

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cattgcaaca tcttacaatg aagggtgacaa gttcttcatt gaccccatga agctgctgcc 120
cctctcacgc ttctgccac agccaaaggg ctgcactcca agaggtggtg gtcgcagtgg 180
aagaggtggt ggtcgtggtg gatttggtgg ccgtggtgga ttccgtggaa gaggtgcacc 240
aaggggtcgc ggacctccca ggggtggagg gcgtggtttc agaggacgag gcagattcta 300
ggatgtagtt ttaagtttgc tctttgttga aacgtgatgc tctacattat ctgttcagct 360
ggaaacatta tgctaagtca gctgtgagcg cac 393

<210> 981

<211> 406
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-D2

<400> 981

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ggaactggaa aagccgtgtc aacgggaacg ctggagagcc caaggacggc ggagaagccg 120
tcggcaggcg acatcgtgtc gatggtgatg aggagaaggc gtgcatgcc caggagcgag 180
cagccctctg aagctgggcg cgtgaaatcc tctggcggga tttttggata cgtgcgagaa 240
tccagtggta aacaagagaa agagggcctg gcatcacctg gtgaggggga gaaaacacca 300
cagaccaagg aaggtgtggt ggctgctttg gggggcgggtg aggaaactgg gcttactgca 360
gatgcgccgg tttctgcaga gaaggcaata gcgggtgatg ccgctg 406

<210> 982
<211> 415
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-022-Q1-E1-D4

<400> 982

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gctggtgtca ctgatcgatg atggatgttc gctgctagtt tagtccatg gtagtccctc 120
cctctctttc aggttgctgc tgctgatggc gatgatagaa atggtagctc tagtcccatc 180
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ctgtgctcgg accaccctct gttccttcgt ttttagcatg ttttaattca gtctctgtcg 300
gatgtaccta gtgtcgtgcc tgtggttggt ttaagaatcc taccagatc tcaatatata 360
tggtgttgaa agcaaaaaan annaannaaa aaaaaaaaaa aaaagcggcc gctct 415

<210> 983
<211> 451
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-022-Q1-E1-D5

<400> 983

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tgttaacggg gatgcgaagg ttccggcaga gaaagccgct gccaccgctg ctctccagc 180
cgttacctac gcggcgaagg tggcccaaac agcagcggcc gagaagaagc ctgcggcgac 240
cgagaagaag cctgtcggtt ccaacgggtg tgtcaagacc ggtgtagctg cttgatcgca 300
taccgatcc tcccagctag ccatgaagaa caaacggacg gtgctggcga accaggcgag 360
acatgcgggg tccaaggta ctgatcacca aaggtggctg ctggaaagcg ggtcggatag 420
ttaagttttn ctagctctct cctttttctt c 451

<210> 984

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-D6

<400> 984

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agaaccgttc ggtcaaggac gcaactgcacg ctgacagatg gatcctggac ttgaggcgag 180
gtgaccccga tgccattgca ctgcagggtg tgcagcttgc gagggaaatc aggcaggcag 240
ccctcgccat catcccagga accgaagatt ctattacctg gaagctcagc gcctcgggat 300
gctacacaac aagttcagcg tacaatgccc aattcagcaa tagacagatt acctccttca 360
aatccatcat ctggaaagtc tgggcgccgg gcaagatcaa gatgttcctt tggttgctgc 420
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<210> 985

<211> 449

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-D7

<400> 985

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gatgatgctc agctactaca gcaagcactc gctatgtcaa tggatgaggg tgcttcagga 180
gctgcagccg tggctgatgc tgctatggca gaagctgctg cagatgacca ggatttggca 240
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gtgtttgaag acagatcatt tgtgacatcc atccttaatt cgctccctgg tgttgacccc 360
aatgacccat ctgtgaaaga tctactggca tctttgcatg gccagggaga gcaggaggag 420
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<210> 986

<211> 446

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-022-Q1-E1-D8

<400> 986

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agggcgacga cgagtatgcg ctgctcacta ggataactga cacatcagca gctgaagcaa 120
gggcaggaaa ggatatacaa ggtataccat gggagaggtt acaaatacacc aggcaggatt 180
acagaaaagc taggttgga cagtacaaga actatgagaa cttccctcag tccggagagc 240
tcatggataa gttgtgcaag caagtggaga gcagcagcaa gtactatgaa tttcaatata 300
aactcggat agtgaaaccc tcaattctcc attttcagct tcggaatttg ttatgggcaa 360
cttcaaagca tgatgtttat tcatgtcga attccacagt anggcactgg tcgtcattgt 420
ctcacanaat gacagatgtt cttgat 446

<210> 987

<211> 430

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-E10

<400> 987

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 actcggagct ccttggggcg tggtcccagt ctgatgacga acagctgagg gagactgcat 180
 cctgggtcca ggggtgtgatc tcacgtgtgc tggtttcatg agggaaagct tctccagcaa 240
 agctgccagc gttgttgatg gttctctggg caaactatatt ctcttgccag atgaaatatt 300
 tttgagaaat atgctgcata tatgtcctga tatcatgttg caaaagtgga acaagggtgc 360
 atgagatcat ttacggtcgt caagttcgta gtagtggcag cggcttgcca ttgtctaaag 420
 tgggttggtg 430

<210> 988
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-E12
 <400> 988

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 tttgattgat aataataatg aatctatgga tgtgaatttt gttggtatga acaattttgg 180
 taataacgcg tatagaggtc attttaatcc taggccgttt cctagtaatt cctctaataa 240
 ttatggtaat tctacaaca aatcttatgt aaattataac aagatgcca ctgattttca 300
 aaatagtgtt aaagaattta tgagttcgca aaagaatttc aatgctttgg ttgtagaaaa 360
 ttgcttaaga ttgatgattt ggctaagaac gtggatagaa tttctcttga cgttg 415

<210> 989
 <211> 442
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-E2
 <400> 989

cccggtcaga attcacgggt cgacggggcg gaaggggctg aacgcgacgg gcgagttttt 60
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tccggggcta ggcacgcca tcgtcgctt tggatatctac cttgtcggcg aggccgccta 180
 caaccgcctc taccgccg cgggcgacaa ccaccactag atctcccca gaggtgaagt 240
 agatggagca aaccaatgtt gatcttttcc ggtttgatct cataaggtct gcatgaccac 300
 cttgtaattc gcgatcagga gatgtgctgt tggccaact agtggtcctg gaacgcgtgt 360
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<210> 990
 <211> 436
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-022-Q1-E1-E3
 <400> 990

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 gcgtgaaggc gatatggtgt tcgatccgtg acgtagagga agcaggggaa gaagaccgcg 180
 acggggcgct ggacttggtg atccgggtcg tggaggtcgc tccaaaggaa gaagaaggcc 240
 accacgacat ggacgacacc gggctcgagc tcggcttggc tcgaccggcc atggcgacgg 300
 cgacggcagg gaggcgcgtt agggaggctc cggcccaact aactgggggg atcggtcgag 360
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 aacgacgacg ggcac 436

<210> 991
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-E6
 <400> 991

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atcagctttc tgggtggagca agaattcact acatTTTTtca gtcaattttt gtcaaaagct 180
 tggaggaaat tgacccttgc aagaatataa gcgatgaaga tatccgcacg agcatacaga 240
 actctgacgg tccaaagggg gctatgtttc tgccagaggt gccttttgag attcttgtgc 300
 gaaagcagat aggccgtttg cttgatccaa gtcttcagtg tgccaaattt atctatgacg 360
 agttagtcaa aattagccat ggttgcttaa ctagtgagct gcagaaatac caaatcttaa 420
 aagacgggtg ggtgaatc 438

<210> 992
 <211> 445
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-022-Q1-E1-E7
 <400> 992

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 agtacatacc gttaatgtag ttgaggctga tggggatcgg atcgcagtga aggggggttga 120
 tgctcaccac cctatgatcg ttatgtctgcg tgacacaccg tttctgaaga ttaggcggca 180
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 gccccgacga gcacgcggcg agtggcatcg tactgagatt gtccacacgc gaaacaatga 300
 gcttgattac ctctgtgggg agcaaattcc agccactctt tcggcggacg ctgctcggtt 360
 ctgccattgt tagtgcttgg gtttcggacg aggggggagg cgccttagca nggatggaag 420
 cttggacgag attatgtgcg gacaa 445

<210> 993
 <211> 420
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-E8
 <400> 993

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 ccaccatcat ttctccagac cagtacaaga agagggtcag gaaggccatg tcaaagtact 120
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ttgcctattc gagtgcaaga tggggtgata gcaactggga agcggcccat tgttttcttt 240
ctatctttttc tttgggtttg ttagaatagt catcgatctg cgccttatgt atgttatttt 300
tgctcgcatc aggctggact gggatcgctg gagagggcgt acggtaaagg ttgcccccat 360
ccaggcagag cccaaggatc gatatgtgta tattatatat aacaatgcta cactgtaaca 420

<210> 994
<211> 473
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-022-Q1-E1-E9
<400> 994

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gtagggtgtgc gtggatacac actattcatc gcatttgtca tcgagcgatt gcaccactat 120
cttcagaagc tcatcaccct gaggaatca gtcaacacct cccagagagg agcttgaaat 180
tttccaaatg gaggttcaaac gtgaatttga gaaaatgatt ccttggctaa gttccaaaaa 240
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tgttttcttt gtacatacat gaattgaatg taatcaacgg aaagaaacat atgttgattc 360
tccaagttag agttcatttt tattttctac aagtagcaaa acttcctgtg tagattaata 420
catgttctgt gcgatcttgt gttacaaatc ttgtagtact gtttttacag gga 473

<210> 995
<211> 432
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-022-Q1-E1-F1
<400> 995

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tgcaagagca cgagctcttg ctgatccgcc gccccaggcc gtacggctgc gacgggtgcg 120
aagagatggg cacctcctgg tcctacaact gcgcggagtg tgacttcgat ctgcacacca 180
agtgcgcgct ggggtaggag aagaaggag agggagtgaa ggggcaggag gatgctgctg 240

ccccagctgg gtacgtgtgc gagggagacg tctgcaggaa ggcctaggta gcgttgtgtt 300
 gtgtgtgttc ctttccagct gaagcgtgtc tgaatcatgt gctgtgtggt gtgatgataa 360
 ataaatcttg catccgatgg tttggcttgc gaaaaaaaaa nnnnnnnnaa aaaaaaaaaa 420
 agcggccgct ct 432

<210> 996
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-F10
 <400> 996

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 aagtttgaat gtgatcacgg tatttttttg gttgctaata atacatcgac acgttagtac 120
 aggtgctttg gatggattga agatcatggt tagctaggct gacatgtgaa tggcttctca 180
 agcatattgt tcaaccggat aaactccttc tcgtgtcctt cttcctttcc gcaaatgaat 240
 ttcccccttt tgggatgaat gatctcaaag ctacgggggc aaagtataca cacactcctg 300
 cgaggtttct tttctgttaa aagaaaaaga gataagttag tattcatgtt atgaaatcac 360
 ccacatgcag tattcaaata actgtacaag gatatatagc cgctccaaaa gaatgtacac 420
 acatac 426

<210> 997
 <211> 432
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-F11
 <400> 997

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 tctacatcaa taacctcaac gagaagatca aactcgaagc acttaagaag tccctcaatg 120
 ccgttttctc ccagtttggg aaaatcattg aggtgcttgc tttcaagact ttgaggcata 180
 aagggcaggc atgggttgtg ttcgaagatg ttgcatcagc aactgaggct ttgaagagga 240
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atgtttagc aaaagctgat ggcactttcg tacctcgaga aaaaaggaag aggaatgatg 360
 agaaacctga gaagaagcag aagcgtgagc agcaccatga tgttaaccag gctggcgtgg 420
 gcatgcatgc ct 432

<210> 998
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-F12

<400> 998

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 gaagaggatg agttggacat cgacggggag cctttgttcg aggacgaggt cgccaaccaa 180
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 gacaagctcc tttgtgagtg ttggagggac atcgggcaag accccaagac tggcggcgaa 300
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<210> 999
 <211> 392
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-F2

<400> 999

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 tttgctatgg ttataaaatt ggtcctataa tggtaggcat ccaagtttgg tataataaaa 180
 actatcatag gaagtgaatt ggatgctatg atcaatttga tgcttgataa ttgttttgag 240
 atagggaggt agtgatacta aagtaatgct agttgggtga ttatgaattt aaagaatgct 300
 tgtgttaaag ttagcaagtc acgtagcatg cacgtatggt taaagttgtg taacaaattt 360
 gaaacatgaa gtgtacctgg cttgtgcatc ct 392

<210> 1000
 <211> 444
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
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<400> 1000

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aggagcacct ggcgccggcc gccctgctg agttcgggca gcggcccatg ttccaggcgg 180
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agatttcagt ttcaggccgg tttcaggttc agttggcgag agcttgctag ttcttttgcg 360
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ggttgagccg agcgtgctga agta 444
  
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<210> 1001
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-F5

<400> 1001

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ctggagcagg aagagcagag attgaagaag cacgacggac gttggatgga aatccaacat 180
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tgagcccat attctttttg ttagcattac agcccatatt gaggccactg ttaaaaaatt 360
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cacattcaga catgatttta aaaata 446
  
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 <211> 407
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-F6

<400> 1002

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 ccggaagaaa atggtgatgg tgctgaggat gaggagattg aggatgatga tgctgaggat 180
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<210> 1003
 <211> 445
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-F8

<400> 1003

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<210> 1004
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-F9

<400> 1004

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tgttggtact tacactggaa gtctgttgct tacagagagc actttcactt ctgaggctga 180
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<210> 1005

<211> 455

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-G1

<400> 1005

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<210> 1006

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-G10

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atccagaagg acaagggcgt cgagccctcc gagttcgagg acaccgtcgc gcaggctttc 180

tttgacctgg agaacggcaa ccaggagctc aagagcgacc tcaaggacct gcacatcaac 240

actgcaatcc agatggatgt tggtgggaac aggaaggccg tggatgatcca tgtgccatac 300

cgtctgcgca agcccttcag gaagatccat gtcaggctcg tcaggagct cgagaagaag 360

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ggttctgctg ttcaacgccc tcgca 445

<210> 1007

<211> 393

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-G11

<400> 1007

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ctgacgacgc gccgcttggt gtgacagatg tggccgtctg ctgtatctgt agtcgctggt 240

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<210> 1008

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-G12

<400> 1008

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 cccattttgc gcattgtgtc ctgataaagc aggttcaggc tgctgccacc gtccataagg 360
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<210> 1009
 <211> 408
 <212> DNA
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 <223> Clone ID: LIB103-022-Q1-E1-G2
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 caaatgtga gtggtagaaa gagaagaact tataccaatg taccttgacc gatgttgaca 240
 atgaatcaag ttcactcaaa tgcgaccaat gaaatagcac tatcggtacc aattcttgtc 300
 ggttctcaca cctacacaat taaaagctta tgggtggagct tggttaggat ggtggcacia 360
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<210> 1010
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
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ggaatttatg taggattcag cagggattgg ttgagtaaaa tgatgaagga acccgctagg 180
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aatgttaaaa ttacaaatca aagccctttc catgatttaa gttcttcttc taaaagggaa 300
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catgccgaag atggcaatac ctagatctat tcgtgtnttt atgcctggct 410

<210> 1011
<211> 385
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-G4

<400> 1011

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agaaaatggg gatgggtgctg aggatgagga gattgaggat gatgatgctg aggatgggtga 180
ggattctgtc aagccgcaat cctcatcgaa gaggaagagg tctggtgggg aggatgaaga 240
tgatgatgac ggtgatgatg atgggtgatga tgatgagaag cctccatcaa agcgatagtc 300
aatttgttct tgctgatctg gtatcttttc tgcttgggcc aagaacgaaa ataatcctct 360
gggagaggat tgttggtaaa tgctg 385

<210> 1012
<211> 404
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-G5

<400> 1012

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ccgcgaaggc gcaggctgcc gtagtgtggt gcagcccacc taagttggtg tgcatttgcg 180
tttgcgtttc tgatgcacgt ccctggactt gcgtcgtagg taggtcacga gcccctcttg 240
cttggtggtg tggctcatgt ctagatcttt gcactctctg acataccctt tgctgttctt 300

gctgtgttcc gtttcaactt cttcatagac atttttcttg ttacatcaag tagaacagag 360
gagaaaaaat aacttcatgt aaaagttttt actatgcctc tgcg 404

<210> 1013
<211> 379
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-G7

<400> 1013

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attgccacga gaagcgagaa cttgttaatt tgaatggttc catttttgcg ggaaatgcag 180
taccttgcaa tcactttggc gttattagta ggtgtcgtgg ttctaagtct gacagtagaa 240
tgaggggtag gtatgaggag gcaagatcct agctacgatg aggttgtgca cgcaagattt 300
atttacgagt tcaggccctt cacggaggaa gtaatagccc tacgtctcag tgcccggggc 360
ctcggtcgat tggattatg 379

<210> 1014
<211> 417
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-G9

<400> 1014

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ccatggcgta tgctggtgca gtttttggag atgcatgctt gaagggctctg aacggagtgc 120
ctgacattgt tgaatgctcg tacgtgcaat caactgtgac cgagctgcca ttctttgctt 180
ccaaggtgag gcttggaag aatggagtcg aggaagtgcg cgggttgggt cagctgacgc 240
agtttgagaa ggatgggttg gaagctctca agggcgagct caaatcttca attgagaagg 300
gtgtcgcgtt cgaaaatgca agttagttag gtcattttgc agattatagc aaaccaggt 360
ctcgttgagg ggtctgttgg tttggtccag tgctttttct gccatcatg tgggcat 417

<210> 1015

<211> 392
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-022-Q1-E1-H10

 <400> 1015

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 aaataggcga ggggtgaggag aatggcgagg atgatgagga agaacaagag gaggaggacg 180
 gtggaggagg tgacgacgat gatgatgatg acgacgatga tgacaatgag gacgacgacg 240
 atgatgacga cgatgtcgct gctgaagacg atgaggatgg agtagaagag gaggatgacg 300
 accaggacaa cgacgatgat gaggaggacg atgacgagga ctgcctcag cccccgaaga 360
 agaagaagaa gtgaagccct tcgacgcggc tg 392

<210> 1016
 <211> 441
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-022-Q1-E1-H11

 <400> 1016

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 agaatttcaa gccagatgta ccggagaagt acgacggcaa gtcgcatccg tcggagtacc 180
 ttagcatcta caccattgcg gtgcaagctg cgggggggcy agacgacaag atccttgcca 240
 actacttccc gctggtgctc aagcccaacg tcaaactctg gtcgatgcac ttgccggaca 300
 actctatatc ctcttgggca gatctatgcc atcagtttgt cagcgccttt acaggcggcc 360
 acaagcctca tggccaagaa agcgatcttc atctgctcgc ccagaaggaa ggagagcccc 420
 tgcgcaagta tattcagaga t 441

<210> 1017
 <211> 406
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-022-Q1-E1-H12

<400> 1017

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cgacaaattc ttgccctgca taagcaaagg aaaagaacta ggccctgtcga tactggattt 120
taccatagtt ctagttctaa aaaggactgt caattttcttc ttaaaaaataa ggctctggca 180
gggttctggg tagtggccca aaccgatacc aatagggatg agggatatat acttatgaat 240
ttcataattg attctattcc gcaattcata actacgaaag taagaggtcg gaaatctttt 300
tatccaaagg tcnctaaagg acattccttt ttttgctcct aagattgaag aagagattat 360
acgaaagact atcaagactt cctaattatc tgacactacc tacact 406
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<210> 1018
 <211> 416
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-H6

<400> 1018

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cgaatacgaa gatctgtctg gggaggaaga tttccccttg gacatcatcg ttgtagatga 180
ttgaaggagc catcaaacct tttggggacg gcacagtgga actctcaatg gaagcaccaa 240
tgtcgatgtc aaaactggcg gatctcgggt aggggggtacc gaactatgcg tctaagggtca 300
atggtaacag gagacaaggg acacaatgtt tacccatgtt cgggccctct ctatggaggt 360
aataccctac ttcctgcttg attgatcttg atgaatatga atgttacaag atttga 416
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<210> 1019
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
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<400> 1019

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 caatatgtat ccagattgag acttagagtc atctggattg gtgtaaaagc ttgcatcggt 180
 gtaactttta tgacaggctc ttttatcacc tccataatcg agaaacgtct ccttagtcat 240
 cactaaggat attcttgacc catgtctagt gatctactta ttagattaaa attgtattcc 300
 tttgccaaac acagagcaag gtatacaata ggtctggttc acagcatagc atactttata 360
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<210> 1020
 <211> 352
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-A1
 <400> 1020

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 gatcgcgacc tacacagcaa gatggtacgc taccgcgcgc aagtgcttgc cagtcttcga 180
 catcgtcctt atggccctgg aggcgcgtac ggggccgctg tttgcgaagc atattcagag 240
 caagatcgac aacatcacgt catccatttg ctggacgaat ctgaatccgt gagctactga 300
 gaggatgggtg tcaatcagag gtatgataat tcgatgcagc tcagtcatat ca 352

<210> 1021
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
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 <400> 1021

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 ttatgccccg cagctacttc taagcctcgg aggaagggcc tggcatccat tgcactcatc 180

ccttgatgat ggggaatcac aggagcggct gcacctttaa ctgtgagcag ccaagcctca 240
accgcctact tgagcaaatc aaggatgaag ctattgcttg gggtcgcgca ggagctacag 300
agtgtctccc ctgtacttgg gctgtccact agcttggtgt tgcgtcgtaa ccagcatttt 360
taggctttaa aatagttctt tctattcatt cgaccaggtt ggtgtggcac ctcagtt 417

<210> 1022
<211> 385
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-023-Q1-E1-A2

<400> 1022

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tagtacttca caacatgctc aaactcacat aatcccagtc aaatgaggat ctaagtgcac 120
ttcatagtta ttactttgta ggatgcaaca naaacaacca tagctctaca tcagccatta 180
tagaagcatc attttgccat atcccaatgt gtgaatgaaa cgtgcagaga tagcttttga 240
agatggagta gatanggagg gaaatattgt atgtatgtgg acgagagagt angagacana 300
cctaacgaga cagagagaga gatagataga gaaagagaga ggaagaagtt angtgtgtga 360
gaaagatgga gacatgtaat atacg 385

<210> 1023
<211> 442
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-A6

<400> 1023

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ggctcttgtg accggagcca ggttctcatg taatgatctc gaatgcagtt tgtcaatatc 120
acctgaaacg gaccgtctga catctcctaa gctgaagatg gcctttgggtc ttagcggcaa 180
cctgcaaagt ataatgcttt gaagaatcag gggatgaatt agatagcggg agtacatcat 240
accacctgat ggagaaaagg agcctagaga aaagcattct gcttgagctg gaacgcgatc 300

atcatctcaa aattcaagag gaagttagaa gtaagttatc ttcgttggag gtatgccacc 360
 aaaatgaaat ccagagaaca atctctgcat ttgctcgact tcagaaatat gcagaatcac 420
 gaaaagagat agatagaagg ct 442

<210> 1024
 <211> 308
 <212> DNA
 <213> Triticum aestivum
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 <400> 1024

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 cctgctataa cgggcagcgc tccctgttgg cgccgccgcc ggccgggggtg gtgccctggc 180
 ggccggagggt gtatgtcctc tgccgccggg tgctcccctg cttgtacctg gatggttggt 240
 tactctttcc gtccaccatt gtcaccggct aacattgtga taatatcagt ctgggtaatg 300
 tttagaca 308

<210> 1025
 <211> 443
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-A8
 <400> 1025

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 gtagatcatg aaaagaatac tttatgttat agttatattg ttgaattaat tcatgatgct 120
 actgaaaatt attatgaggg aggagtatat gcttgtagta attgcaataa tatcaagttt 180
 cctccctatg tgttgaaaat cttgaagtta tgcttgtttt accttcctat gctagttgat 240
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 aaatgtgtta gtcatttct tcatgattct ctatttatgt ttcaattcat atcttttatg 360
 tgagcatcat tgagatcatc atgcctagct aaaaatgcat taaagaaaag cgcttggttg 420
 gagacaaccc aatatttacc cct 443

<210> 1026
 <211> 353
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-023-Q1-E1-A9

 <400> 1026

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 gtaatgttcc aagaatgtaa taaccgggta acaataacca aaggttgtgc ctttgccaaa 180
 ggtaaagggtg gttaatttcc aatgaacctg gaagttgtaa ttgcctctgc attcaggctc 240
 gcttgttttg gatgcgcgat gcaagttctc gattaatcct aatcaagatg tagtggcgat 300
 ggtttgtgaa cactccctat gtagtgctga atgatcatgg tgttttcttc ttc 353

<210> 1027
 <211> 390
 <212> DNA
 <213> *Triticum aestivum*

 <223> unsure at all n locations
 <223> Clone ID: LIB103-023-Q1-E1-B1

 <400> 1027

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 ggaaatagag agttattttg actgctcagc ttcagatctt gtgctgggtg gtgacagata 120
 ctttactgat gttatctatg gaaataggaa tggttttctt actgtattta cagaaccatt 180
 gagttttgtc ggtgaatctt acattgtcag aaaggttana aagctggaag cgtacattat 240
 caattattgg tacaagaaag gacacagacc aattaagcac cctttgctcc ctgatgcgag 300
 aacgattgtg aagtttgatc cgtgtgacgg cccagtctca cctanagcat agcacagtga 360
 tatgtatatg ttgttaccaa ctgatacgct 390

<210> 1028
 <211> 442
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-023-Q1-E1-B11

<400> 1028

cgggtccagat atccgggtcg acgggttggc aggcogaaag agaaaccagc tgatccgcgc 60
atcacaatta aaagggcagt gcgctgcagc agatgtaaag gctatgggtca caacaaagca 120
acttgcaaaa ttccatcag cggcgaagcc ttgccgcct tgccaccagc tgagctctcc 180
gatgtacaca ataaggtgga gagttgctct tgatgttccc tgtaagcaaa cgctgctatt 240
tttctttggg aacctgcggc atagtagttg attctagctc caagttgctc tgtattatc 300
actgttttgc ttaggctagc gacgtttgtt tagtaaatta aacattgtga tgtgcacat 360
tagagaaaca ggggaaattc tgccatgttc cgatgccag tctattgctg ttgtatttac 420
cttctctctg ccgtgcgtct gt 442

<210> 1029

<211> 342

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-B2

<400> 1029

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ttcccctccg gcaaccatgg ctgggatggc atcacgctgc gaaggcaaga caaccggcga 120
caaaggctac tgtagtgtga ttattcacc ctatcgacag tcgtcgctc ttcatectcg 180
cctggcctac ctgttccaac actttggtct ggacaagatc cgcgcgatta tgaacagttc 240
tgatggtaag acgttcgatc aaacgatcga cacgttacga gaggaatga ctgctttcaa 300
acgtgctcat gatgtactct acatcgtcta aggcgacgat cg 342

<210> 1030

<211> 425

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-B5

<400> 1030

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ccggcaaaaag ggatccaaaag ctccaatggc tggcaagtac atcgtcgccg gcctcgtcgg 180
ctcctgtgtc atctcgtatg cctgtgacta aatcgtttct caaaagaaga tcttcggtgg 240
caccatccca aggactgtgt ccgacaacga gtgggttaag gcgactgagc atatgttcca 300
ggcctggccc caggtcgctg ggccgcccgt catcatgaac cccatcagcc gccagaactt 360
catcgtcaag gacctcaagc cctgatgctc aagatcctaa cgtttgccgt cggttggaac 420
cttta 425

<210> 1031
<211> 440
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-023-Q1-E1-B8

<400> 1031

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acgacgctgg gaaggaagat agtgggtgta aagatctggc cctggtagag gaccctgtcc 180
tggtcgagga tccagaggaa gcatttcagg aagaaatgag agcgcttttg gcgtctgtcc 240
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gggtatacca gtatatggtt gcccggtgtc ctgtgcctac ccatctcgtc ttncctatct 360
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<210> 1032
<211> 399
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-023-Q1-E1-C12

<400> 1032

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tgtcgtagac atanggtcag aacttgcaaa agaaagaaaa aaccaatcaa cagcgtaagt 180
 tgttaaagga ataatgcccc aaaggcatta ttaaattggt aatttaanat tccctaanac 240
 catgataaag gttaataatc catgctagaa ttgtattaac cggaaacatg atacatgtgt 300
 ggatacattg acaaaacacc atgtccctag taaccctcta ctacactagc tatttactca 360
 aatatggtaa agtttccaac ccatacacat gtgttgaca 399

<210> 1033
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-C4

<400> 1033

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 accagccgac acagcttgaa gtccttggaa gatatgtcgt gcgtagcacc tgccgaccag 180
 gcatgacaaa gcgtagcacc tgtcgggtcag gcatgacaaa gcagttcgat aacgggcacg 240
 catgcgtctt aataaccatt ctaaaattct ttcatacagc agcaagcagc aacagtggcg 300
 tgcaaaattt acatcccgat atttttgcca cggcgcaaac tcgaccagta gtccagtagt 360
 agtcgccgt accaagtta tcaacacccg acggctaate ctagccacta gctaagctga 420
 tgcttctccc 430

<210> 1034
 <211> 222
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-C6

<400> 1034

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 tcaacaaagg gattggagtt gacaacatgc actaattaaa tgatgggctg ttgaaaatgg 180
 aaccggttga gtaataagat cgccgttggg aacaaaatcc gc 222

<210> 1035
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-C7

<400> 1035

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ttaacgcaat catccttgct gtacacacct tttgggagag acatgcatga atcatgattt  180
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catgcttcac ttataatatt ttgagagtct tttagaacta catggtaatt tgctttgggt  360
ataaaattag tcctaatatg gtgggcatcc aagatgggta taataaaaac tttcatataa  420
atgcattgga tactat                                     436
  
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<210> 1036
 <211> 202
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-C9

<400> 1036

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gcgggcgctc gagaggatcc aagctgacag ttgcgctgca tgcgacgtca aagatcttcg  180
ataatgtcac cgaaattcaa tt                                     202
  
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<210> 1037
 <211> 403
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-D1

<400> 1037

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 cattctggcc ctatggaaaa ctgtttcttca actgctggct agtctttcct tgcttcaatg 240
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<210> 1038
 <211> 395
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-D10
 <400> 1038

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 aaaatgccaa agcggaagaa agcctgggtt cgtgatgcag atagttttga aactcgcatt 180
 acacttgagg cagaccgagg attccttaac ctcttgacc ggacgcaaga cagtctcagg 240
 aatgcacgaa acaatgcgcc aaacatgacg acgaaagtct tgggtgggtt tgttagaacc 300
 ttctactttg atgaagaatc taatgctgat gtcattgatg gcgaaatgca aattgagtat 360
 gatctagaac agatcaaagt ataccctatc acagt 395

<210> 1039
 <211> 440
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-D11
 <400> 1039

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 tcctctgttc ctttttgttt tctctttttt atatgctctg ctctgtgtat tgaaatgatt 180

aaaataccat tccatttcta aaaatcctgg aaataatcag aggcacattt gaaaatattc 240
 tcaactgcct aaaagtactt ccaagagtat ttgagcactt taaaatattt atagtattga 300
 aaatgcccac attcaaatac ttatggcttg ttcaaaaatc cagaatggct ccataatttg 360
 caagaccatt tttggcaggg gtttaaacca gagccaaaaa tgggtgggctt ttatgaaggg 420
 cattttggtt tcattgaaat 440

<210> 1040
 <211> 395
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-D4

<400> 1040

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 gacatgcctc agcgagttca agtcgcttgg caaattggcg gtcaggctca tcttctctca 120
 tgcaaccgcc aaggggttca aatgcacgcc gccgatgacg cgggtggctca ccgcgccagg 180
 cagctcagcc ggcagcattg gccggggcgca ccggctgggtg ttcacgcggg cgaactcgaa 240
 gctggagagg agggatttct caaacgacga cgacaaggac gtggagctgc tgacggaagg 300
 agacgacgac atgctaacag agactggcaa tgtggatccc tcctcctcct cagtgtagca 360
 ttccattcct gctgctgctg ctgctgctta atttc 395

<210> 1041
 <211> 399
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-D6

<400> 1041

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 ctgctcaag gccgccgtcg gccaccccgga cacgctcggc gactgtccct tctcccagag 180
 ggtgctgctc acgctggagg agaagaatgt gccctaccag atgaagctca tcgacgtcag 240
 caacatgccc gactggttcc tgaagatcaa tccggagggc aaagtgcctg tgtataacgg 300

tggatgatggc aaatggattg ctgattctga tgtgatcact caagtcattg acgacaagta 360
cccatctcca tcaacttgta cccctcctga gtatgcac 399

<210> 1042
<211> 439
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-023-Q1-E1-D7

<400> 1042

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ctctccgctc ctcacctcgc gccgcgccca cactcccgag ggagtctgtg ctgagctcca 180
tggacgagcg gtcctccgga tcggtcgacg ccgatgggtt cccctcctcg cgtcgggaag 240
gattcgggca tagtaaattcc acaactgcaa cttctagtcg ttttagaggg caagatcacg 300
cttttgtaag atcactactcc gataggttgc ttaagtgtga cctcacgttg gatatgctat 360
cagaaaatga gaagatgaag ataattgaga aattggtaaa gatccagaaa gatggcacac 420
tggaggtana tgtgacccg 439

<210> 1043
<211> 403
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-D8

<400> 1043

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tgacgatggc ggaggacgga gctttgcacg agcctgacca cgacctctcc gacgtgtoga 120
tgagcagggt tttctctcag ctgatcaaag ctgaggggag gtgaaaacgc gccggatgat 180
ctgttagggt accggtagag gtgtgggcaa gccttggtt tttattttct tgttgaagtt 240
tacctgagat gtgtcacgtg taattgggtt tttcatcct tgtaattgta ctgaactacg 300
gtttggattt ctgatggcct taccttacc acttctgcgg gcacatgatt tagcggatat 360

aggtatcttc ttgtatggaa tctattcggc tctaaccata ttc 403

<210> 1044
<211> 392
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-E1

<400> 1044

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gcagatgagg agggagctca agatgagtga gaaggggatg atttacgtga aggggatatt 120
cgagacatga ccgatagctt tgatgtctgg agtatagtga ccaagcaagc agttcaaagc 180
aggctttcct gtgatgcggg gcaaaatgaa ggtgggagag gaggtgaggg tgggttttgg 240
taatccacgg gcaaatctgt gtcttggctt cgagaaatag agatggtttt tgtcgggaat 300
tcggtatggc tcctaggtcc aaatgatccc agtatctgta ccctgtttgt atatcaacta 360
cgtacataag agtttaacat gcattccgca aa 392

<210> 1045
<211> 447
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-E11

<400> 1045

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gatgctgttg gagttgatgg actcgcttat cttccaagcc ttccgttggt accgttgtaa 120
gatggcctta agccatattt attgcaataa gttctctttt gagacattcg atgtaataag 180
tgtgtgattg ctattctggt ataaatcctt cgggtactat gagtgtcagc attattgatc 240
tagggatgac acttatgcac agagatcaga ctggttgagg tctggtcgct acaagatggg 300
atcagagcac acgctgactg taggacacga ccactaagct aaagccctag atcactactc 360
actcttctca tgtctgactt ctcatctttt ctactctttt aggatggcgg atgcaaggaa 420
caagttcacg caaccggatg aagatac 447

<210> 1046

<211> 406
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-023-Q1-E1-E5

 <400> 1046

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 cagagtactc tagaaaccag ctctgggtcca catgggttggg atttcatgaa tcaaactggt 120
 tggagttttc aacatgaacc aagttcctga aatcagcatg attcggatct tggatttccg 180
 aaatgaatca agtttcagaa accgggcaata tccaaatttt agaaaccaac gtgatggaaa 240
 gaataaatga tttggtgacc agagtcagat tctagtatgt tgcaattctg cagagacact 300
 aaaaggtggt gcaccattac cgagtccttg tgctcactga tttcacacct ttgtaatgct 360
 aattgaattg aaaatgagat gagaggtgat aacagacatg ctttta 406

<210> 1047
 <211> 372
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-023-Q1-E1-E6

 <400> 1047

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 ttccaccacc tggttgaaca gatgatagtc catacatgga aactgctaca acctcagcga 120
 ttgacatact gatcgtgggg ggaacgggaa cattcatcgg gcattttaca gactgcgtct 180
 tcgcccattc ctagtttaat atcactgaaa tgtacattgt gttttggtta ctgtaccaac 240
 tcgatatcag gtcatacagc atcatcacc ggccgaaatc ggccggcaat gtggttggtt 300
 tttgttgctt agattgctat gtccgcatat gagtggatcc gcctgtccat gtctcagcaa 360
 caacttcccg tc 372

<210> 1048
 <211> 343
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-023-Q1-E1-E8

<400> 1048

attcccgggc cgacggggaa gagattcgtc agcacgacgg cgtggtgacg atcttgatgt 60
tctaccgtcg cagggcttcg cctaagcacc gctacaatat tatcgaggat tatggtggag 120
gggggcaccg cacacggcta agagaacgat cacgaagatc aacttgtgtg tctagaggtg 180
ccccctgcc cccgtatata aaggagcaag ggggaggagg ccggccctag gaggggcgcg 240
ccaggagta tgattcctac tctacttgg agtatgtttc ctcctttcct agtccaacta 300
tgagaagggg ggaaaagggg ggaagagggg aaggaaggga gac 343

<210> 1049

<211> 402

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-E9

<400> 1049

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gaggagcacc cagtacttct gactgaggca cccctgaacc ccaaggctaa cagggagaag 120
atgacacaaa tcatgtttga gacettcaat gttccagcca tgtatgtggc catccaggct 180
gtgctttccc tatatgccag tggacgcaca acaggtatcg tgttggattc tgggtgatggt 240
gtcagccata ctgtgccaat ctatgaagga tatgcccttc cacatgccat ccttcgtctt 300
gacctcgctg ggcgcgacct aactgactgt ttgatgaaga ttcttacgga gagagggttac 360
tccttcacca ccaccgccga acgggaaatt gtaagggaca tc 402

<210> 1050

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-F11

<400> 1050

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agaaagtgat ggaagaaata ttcaagccta ctgatgacag caccctcagc gtccttctc 120
ctgagaagaa ggtgccaagg atcagagact ccccttcaa caagaagagc ggctcggttc 180

tgcacagaat ggcgagctct tcaacagga cagaagatgc tgaggctcct ccctccggca 240
 gctctgctga gccagttgta ccgagaagga caacaaggga gaggaaggca gcagtagtct 300
 acgttgcttc tgagagcgaa gatgatgagt ctgaggatga agatgtgtcg gaaccaagcg 360
 acgatgacga cttctccgaa gatgactaga ctccctgggt caaacgcca tacattg 417

<210> 1051

<211> 409

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-F2

<400> 1051

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 acgcactctt acctttccac aatttgctag cctctacggt accgtgcatt gcaactttctc 120
 acaccaagac gtggtgcaaa cttegcaggt gcatccaaac cccgtgatat gatacgtctc 180
 atcacacata agccttatta tatcttcctc aaaacagcca ccatacctac ctattatggc 240
 ttttctatgg ccattccgag atatattgcc atgcaacttc caccgcttcc gtttgatgac 300
 ttgagcattc attgtcatat tgctttgcat catcatatag ctgacatagt agttgtgggt 360
 cagccaccgt tcatcatttt tcatacgtgt tacgctagat cattgcaca 409

<210> 1052

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-F6

<400> 1052

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 gaggcgccag gtggagggtga ccgccagaag ccgagaacca tggggattct attcttgttg 120
 tactaacatg ctatacgccg cgggcgttgc gcagcagcta atgggtttcg tctccccctgc 180
 gctcctctgc cttcccttgg gaaaaatgtc tccgactagc gtgtacaatg caaaatctgt 240
 tgggaggcta agccgttttag tggcgacgac agataaatta tttgttcact ttgaatagcc 300
 aaattctgta tctgatatat gctttatgcg ttgtgagctc aaaacagaca tttgcttctt 360

tgcttgtgtt gtcagtggtg`atatgcggcg cctgctcggt tcacatgtat taagaccgta 420
 tgcagtgcaa agtgcttgat aaaaag 446

<210> 1053
 <211> 373
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-F7
 <400> 1053

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 ctgctctggg cgatggccac gctgggcttc gaggagtaca tcgagcccct caaggtttat 120
 ctgcagaagc acagagagac ggaggggtgat agtaagctac ctgggaagtc tggatgatgac 180
 tctgttaaaa aggatgcact gggtcctcat ggaggagcaa gtggcacaag tgcgcaaggg 240
 atgggccaac aagtagcata caatccagga atggtttata tgcaacctca gtaccataat 300
 ggggacatct caaactgaag atatggacca tctccgagac tgctgctact ctgctaagcg 360
 ggttttcgtc atg 373

<210> 1054
 <211> 345
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-F8
 <400> 1054

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 atctatttcc gaagtttgtc gcaccacata atcaatcaat gagatgggta actacagtaa 120
 ctctagtact actgcaagta ctatcatcac ttcaagccct tgcgtgaaca agtccgggtc 180
 aacatattgc atgctaccgt ttctgatcaa cgctgcatg tgccgattct tcatcttcaa 240
 aggtatgggc aggtggcata actgagactc caacgacatg atgatgccat ctcaactgtt 300
 gcatacatca ccaccacaac atctgaattt gatgtattgg ttgga 345

<210> 1055
 <211> 278
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-G1

<400> 1055

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ccatcttatg caggctaaca ccggtaacca tccatcgcac acttggcgag caattattat   120
tgggcgaaact gtctctaaaca tgggtctcat caaaagggtg ggaacgggca cagagatcaa   180
tatttgggaa gataaatgga tcccgctctaa tccgtcacta cgccccttgt ggaaacctaa   240
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<210> 1056

<211> 404

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-023-Q1-E1-G12

<400> 1056

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caagtggcct ccacctctct ctcatactcg tttgctcct ctctagttat aaaatatctc   120
ctttttacct gaaagttaaa gaaggcaaga gaanganggg taatatggac agcatgctgt   180
ctgtcaaaga ttattcggtg caggagggac tgctcgttcc ttacaagaaa ctggtagcat   240
accagagcat tataatcaag aaaagtangt gctaattcaa tgtcattccc ctttatgggc   300
accctgagat aattagctag acgagtggca taaattccac caaagaaaac tccatcctta   360
gcattaagat gtaacctcct cgcagtaata cccccaagtt atat                               404

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<210> 1057

<211> 363

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-023-Q1-E1-G3

<400> 1057

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gggtcaagaaa tcccgggtcg acgggaanaa gaaaggcaag aagaacgtgg agaacttcaa   60

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gatttacatc ttcaaaggtg ctaagcaggt gacccgacat cgaatccctc caagcatgtc 120
atcatgaact ccttcatcaa cgacatcttc gagaagctcg ccggcgaggc ggccaagctt 180
gcccgcctaca acaagaagcc accatcacgt cacgggagat ccagacctcc gtccgcctcg 240
tcctccccgg cgagctcgcc aagcacgccg tctccgaggg caccaaggcc gtcnacaagt 300
tcacctctc ttaggtcttt tgtcaaatct cttctggcgt gtgatggatt catgtttgac 360
tgt 363

<210> 1058
<211> 387
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-G6

<400> 1058

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tggataaccg cgctgaggat acccgaaggt ttctcctgaa gccagatcat ccggggccacc 180
tcccggatca tccggacgac ggccggatca tccggacccc catccggatc atccgggctt 240
tgcttgcgtg caacgcttcg ggccaaggcc catgtacca ttcgccccct cacttacccc 300
ttcgcccact agactataaa tagacctcct ccacctcctt tctaggggta gcaaatatga 360
tagctcatte ttaggtgagc tttgctc 387

<210> 1059
<211> 432
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-G8

<400> 1059

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atcgagtggt ttctcccagc gctaccttag ccgatataat ggaacgtaat gtacccaaac 180
atgggagccg ggcaaaccga actattgacc caagacatga ttccgagctg atacatataa 240

tgctataagt tcgggggtgcc gcacttgtga aagtgttcgg acttatcaca ccataatttg 300
 gggttacttaa gctcctgggtg tacttagccg taccaaagcg tatgggtgca acatgtcata 360
 agtgaacatg tataaataga aaaaggaatg caataatagg caaaaagcga tgcacgtttt 420
 attcaaaaaa ta 432

<210> 1060
 <211> 374
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-H7
 <400> 1060

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 atttttgtta attcagacag attcgattga gatggcccaa gatagataaa ttccgagcgg 120
 aatttgtact agataatata gactcatttt cccatgtgga attttgagtg tttgtgctgg 180
 ccgatcgctt gtttgttgaa tccagataga tttaagcatt tcccagctga caaaaaaaaa 240
 agaaaaaaaa aaaaaaaaaa aagaaagaaa aaaaaaaaaa aacataacag agaaaaaac 300
 taaaataaaa aaaaataaac aaaaaaaaaa aaggggcccc tcaaaggggt caagcctaac 360
 ttccccgtga atgg 374

<210> 1061
 <211> 384
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-A1
 <400> 1061

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 gccttcgaca acaagatcaa cgccaaccgc acgctgcggg aaatcaagct gctccgccac 120
 atggaccacg agaattattgt tgcaataagg gatattatac ctctgcaca aaggactgca 180
 ttcaatgatg tctatattgc atatgaattg atggacaccg atctgcatca aattattcgc 240
 tcaaatacaag ctttatcgga ggagcactgc cagtatttcc tttatcagat ccttcgtggc 300
 ttgaagtaca tacattcagc aaatgttctc caccgagact tgaagcctag caatcttctt 360

ttgaatgcaa actgtgacct aaaa

384

<210> 1062

<211> 358

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-A11

<400> 1062

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catgatacca tatattacgg tgggtgaaca aattactgcc gagcaattga tagaaaagtg 120

catagttatg atagtatcta tgcacgacca tgaacatatg catcacgtcc gtgtcaagta 180

taccgaaacg attctgcacg tactactatt actccacaca tcgaccgcta tccagcatgc 240

atctagagtt ctaagttcat aagaacagag taatgcatta ggcaagatga tatgatgtag 300

acaaaaaaaa aagaaaaaaaa aaaaaaaaaa aagcggccgc tctaaaggat ccaagctt 358

<210> 1063

<211> 402

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-A8

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aatgggttcc agaagctcga caagatcaag gatgccaacc gccggagcat gcagctcgaa 120

gagctcactg acaagatgag agattgcaaa aggcttatca aagacttcga ccgagttgtc 180

aaagatgagg catgcagtgt tgatcccaac actgctaaat ttctgaacga gagaaagcag 240

tcgctgatca aggaattgaa ctcttgtgtt gctctgaaga aacaacatgc aagtgaaaat 300

aagcgagttg atctttttga tgccccaagt ggtgaagatg cctttggtga agaaaatgtc 360

ctgttagcat caaatatgtc aaaccagcag ctaatgcagc at 402

<210> 1064

<211> 374

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-024-Q1-E1-B10

<400> 1064

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ccctcttact gagctttgct tgagcactga taggacaaaa ggtagtagaca aaagcatgag 180
taaagataag cacaacataa gatgatcatc attaccgggg tgcgggtcttg aaagccggca 240
ggttcgattg catagaatca ccagtggaag gtgaagtgtc ctgataattt gaatcagaag 300
aattgagcgg ttgacgagta acgcccggca aaggatgaaa aggggtataag ttggagataa 360
cctcgggtccg gcgc 374

<210> 1065
<211> 368
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-B2

<400> 1065

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tgatgaagtt ggagcacaat tttatttatt gattgtcatc gttatgagtg gcagtcggcg 120
acgatcgatg gtcttttctt accaatctat ccgcctaaga tcatgcgtct agtgctttgt 180
ggttaatggc ttgtagattt ctgcaataat tatacgagtt ctgtattgac aatgttgagt 240
ctatgcatta tacgcactct catccttcga tcattgctag cctcttcggg accctgcatt 300
actctttatc agcttgacag ttcgttccag cttcgctgtg gcacgaaaac cccgtgatac 360
gatatgct 368

<210> 1066
<211> 412
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-B4

<400> 1066

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cctcgccgat gcttcacggc tagcgggatc ccgagacatg ctgcggccgc gtctgggtgt 120
 cttcggcgac tccatcatcg agcagtcctt ccgccctggc gggtggggag cggcccttgc 180
 ggatacctag gcccgctatg cctatactgt tgtcacaggc tacgggtggat acaactcaag 240
 atgggcgctg ttccctgatcg accgcatctt ctccctgggt ggcttgccag ccgttgctac 300
 gaccatattc attggcgcta acgaggcagc gcttctaaga ccatcaacc agcagcaaca 360
 tgttcgggtt caggagtcaa tacagaatct caaaccaatt gttaatcacc tg 412

<210> 1067
 <211> 406
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-B6

<400> 1067

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 atgggttcca caagctcgag aagatcgagg atgccaagcg ccggagcatg cagctcgaag 120
 agcttactga caagatgctg gactgcggaa ggcttatcaa ggactttgaa cgagttgtca 180
 tggatgagggc gggcagtgtt gatctcaaca ctgcgaaatt tctgaacgag agaaagcagt 240
 cactgatcaa ggaattgaac tcttatgttg ctctgaacaa tgaacatgca agtgataata 300
 agcgagttga tctttttgat gctccaagtg gtgaagatgc ctttggtgaa taaaatgtcg 360
 tgtttagcatc agatatgtca aaccagcagc taatgcagca tggata 406

<210> 1068
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-B7

<400> 1068

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 aaccagctgc ggcgcgatct gtgcgatgga attgcggttg cacgtcttct gaacgcgaca 120
 atggttctgc ccaagtttga ggttgctgca tactggaacg agtctagacg tgtttgatgt 180
 tgaacacttc attgagcaaa ctagagggtta tgtggaggtg gtcaaggata tgcccagga 240

gatatcgttg aaagagccat ttaaggtcga ttgccgaaaa cagaaaggac attttgatta 300
 tgtagaaaca gttcttccag ctcttttaca acatcgatat atttctctga cacctgccat 360
 gagccaaaga aaagatagat atccatcaca tgcgaaagct tggt 404

<210> 1069
 <211> 412
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-B8
 <400> 1069

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 agagactgag actgcatgaa acggtaaggc cgcgcttggg ctctctgggt tatttcacac 180
 ttgtattaag atacaagtgt aatttactcg tcatcggaac caacgcgtaa aatacaggcg 240
 taatgaaacc gacggccccg ggtctgtaag taagaccggc gggttacgcg tgtaatttga 300
 gagaccggtg tatattttac tagtcgaaat cgaccaacca agcgcttcgc ctgagaccat 360
 ctgcttttat ttacaagcgt cagttttaca agcggttttg gttggcaaac ga 412

<210> 1070
 <211> 396
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-024-Q1-E1-C10
 <400> 1070

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 acggcgcccg atggcgccgc cgacaaggac aatgacaaga agaatgcgcc tgtgtctcgc 120
 tcctctcgcg ccgggattca gttcccggtg ggccgtatac acaggcagct caagcagagg 180
 gtctcggcta atggccgtgt gggtgccact gccgctgtgt actctgcaac aatccttgaa 240
 taccttactg ctgaggtcct tgagctggcc ggcaacgcca gcaaggatct caaggtgaag 300
 cgtgtcacc ctcgccacct gcagcttgcg atccgtggag atgaggagct ggacaccctc 360

atcaagggca ccatcgctgg tgggtggtgtc atccct 396

<210> 1071
<211> 369
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-024-Q1-E1-C12

<400> 1071

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tataggcacc gggaggatct agggttacac aaggtcngtt acaaaggaaa agaattctaca 120
tagttggttg ccaagcttgc cttccgtgct aacgagagtc ccatccggac acgggtgcag 180
tcttcggtct tcgtatcttc acageccatc agtatggccc atggctaaca cgctggacgc 240
ccgaggaccc cttagtccac gactccctca gtagcccctg aacctggctt caatgacgat 300
gagtccggcg cgcagatttg tcttcggcat tgcaaggcgg gttcccttct ccaagatagt 360
ctccggata 369

<210> 1072
<211> 171
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-C7

<400> 1072

aattccccggg tcgacgggct ctccggaggta ctactctggt tttttcagat ttatttttcc 60
ttcaagtact ttgttttttc atggcattgg gggtttttctg gaaaattaca tgaccaccaa 120
ttcaaaatgg ccttccaatt taaaaggat aacaaaaaat ttctgcaac c 171

<210> 1073
<211> 399
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-C8

<400> 1073

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acattcactc ggtttcatca gggcagtgaa gtttctcatg tataatatat tcgcatcagt 120
 tgcataataag tcatgtact tgcacagatt aaccaaatat tatcatgcca catgaatggt 180
 agattatata tccgaatcat ttacatcagg aagggatgag gaactccaac acatgtactg 240
 gccagccat aatgtttgcg tacatgtagg attgtaagga tctagcataa attttcttgt 300
 tggatggtgg ttttagaatc tgattcattt tctgattcca attgacagaa gacgtaacct 360
 aatagtatag ctaaatacaga gattcggtta ctgaatcca 399

<210> 1074
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-C9

<400> 1074

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 cgcgttcgat gaagttgtag tggtgaaatt ttatatggca aaataccaga agagtatgac 120
 tcgtgaaaac tttcgagttc acacatatta aggaaggcat aggttcaagc catcggggct 180
 tcttagaaca tataccacga acttcagaag taaataacac aagctcaaaa gtagagcatg 240
 gttgataaag cagaggatac aatttaccaa aggctttata tattcatgga aaagctcaca 300
 aggttatttg aatatgagga tattgtgaga taaactcaa caaaggatcc ggtggtcttc 360
 aagggatctg atgtgagcat cggtactcaa ccagaggaaa aaaga 405

<210> 1075
 <211> 124
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-D1

<400> 1075

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 gggg 124

<210> 1076
 <211> 271
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-024-Q1-E1-D5

 <400> 1076

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 aaacgtctgt gagaccagtt aactgcacg tgtggcaaca cgcctcagtc acagccgcgc 120
 acaatcaggc aatggcttat tctactgatct acgtgtgcgc gaggtagacc tgctaggggc 180
 ataaccatgg aagcaccccc tctatcaggt tactgttaag caatgattca gagttgaagt 240
 tcctctcttc atagcttacg tggcttcac a 271

<210> 1077
 <211> 463
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-024-Q1-E1-D7

 <400> 1077

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 cagcaccaag gctgaatacc gaagggttca aactttggag ctgggtggact gcatattgaa 120
 atcctgggtc ggcgacgatg tctcgagcgc atcaaagggtt ttgaagaagc atatggctct 180
 gctgtgcgag ctgatgcagg aaatcctcac aaagatgcc gaaaacaagt cgcgtcgcca 240
 ggaggtgctg aggttctgca cgcgggctct gcaaaccgtg acgaggctca acctgaaaga 300
 gaagtttcag aagaagctaa gctcggaagc gtacaccctg tgtgaggcac agctgggagc 360
 tgcatttggt cccttccgac agtgatgcat gtgaattggt tcccgaaaac attgaaaggg 420
 gccccaaatt taatttgggg caaatttaaa aaaaaaaaaac aaa 463

<210> 1078
 <211> 420
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-024-Q1-E1-D8

 <400> 1078

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 cggtcgatcc agatggagag gcagcagaac ggcccgtgac cgagcgacct catgcggtgg 120
 ttggccggca gaaagaaaga aatgaaggaa gaaagcttag ccaattagcg cttgggagta 180
 tgtttgttatt tttgagcagg caatagcatt cctatatatt tgtccctcgg cgtcggtaaa 240
 agcgaatttt tggcgactgt aaatatgcaa agcaaagcag gacttgtatc tatctatcta 300
 tctatctgtc tatctatgcc acaatgaaaa ctgttaactg ttagtgttag ggtgtatgtc 360
 tcaggcaaaa agaagtgaaa cctgggagtg atgtctctgc tgtattatct atgtatgtgc 420

<210> 1079
 <211> 431
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E11

<400> 1079

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 acaagcctca tgacctgctt ttgcgcggga gaggatagct ggctggcaag atgcagtacc 180
 aatgacccaa gtacatccga agtcagggat ggaaatggga aaccgcaaca cagcaaggac 240
 cagcacagga ccaagggaaa tagcccgaag agcacagcag tcaacgccgg attcaaaagc 300
 tctcggcaga atcataaaaa actgcccctt aaggataaca gggacgagct atctaactta 360
 gacaaaatct tggacaagat atgccaaatc cacaatatac cccgggaaac cttgaaacct 420
 atacccacag a 431

<210> 1080
 <211> 367
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E2

<400> 1080

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 agagggacga agtggagtac aagagggagc gccatgtgat tgtccgcaag gcttgagctg 120

aactgaaccg atggagctac catggaaccc tctggccatc tgatgtgtgt gtataagtag 180
 tgctgacact gcagcccggt tcttgaggaa atttgttggg tcgttgaaat tgagttgtag 240
 ttgtactact ttgagctgta gctgtagccc taaatcatat tgtgtcgaac tgaagatgta 300
 ccccgtaag ttcattcatg aatgcaacat tttggcggtc tgcagctgag cagagtcaat 360
 gcctaag 367

<210> 1081
 <211> 275
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E5

<400> 1081

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 ggattctcat agacacaccg gtcattggga tcgacgatta ctttctgcag taggaacagc 120
 atatggctag cagtagcatc acgaacctca tcttgtgtga tctacaactt cagcactgcc 180
 agcttacgta gacgaccatt gtggacgagc ctgcgacttc tacacgtgcg ccaggtacta 240
 ggattcatal tcctacggat catacgtttc ctct 275

<210> 1082
 <211> 371
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E7

<400> 1082

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 aagcgtgcc ccaacgagtg catcgttatg tgcccaggtt gcaagaccta ctgctgtaag 120
 catatataca tacatcatgc gtatcaccta tacatatatt cacacatact agctatgtcc 180
 atacaaatta agaagtcgag atgcctaaat taattactta acatttttgt acgagtgtgc 240
 gatttctacc ccggcatgtc gtgcggggac ccacgcttca ctggtgccga cggcaacaac 300
 ttctacttcc acggcaagaa ggatcaggac ttctgtgtcc tctccgatgc cgacctccac 360
 atcaacgctc a 371

<210> 1083
 <211> 394
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E8

<400> 1083

taccggtcaa gaattcccgg gtcgacgggg agcggcatac tttcattgtc aacataacaa 60
 ccaagagatg gcgatatctt ccatgctaca cacattataa gcgggtccga aacagactgg 120
 tatagtttag actccccctc caccaacaag catcaatcca tgacttgctc gaaacaatga 180
 gtgcctccaa ctaacaatag tcctgtggga gttttgtag caattaattt gatttggtt 240
 gcataatgca tgtgactggg catcacgggtg accagccatt ttctcatgag tgaggagccg 300
 agtccaatcg tcttgagaat aacgcgccta gcatggacga tacagacaac cctaattagt 360
 acatgcacta tacgagcatg cacaacataa tttc 394

<210> 1084
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E9

<400> 1084

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 atgcatacat gagtatgaca gaccatagtt ggagcacaac aatgggttcc atatcgatgc 180
 tggccacaag aacgagcaca gagcataggg catggtgctg gcctgctggg agccttgcca 240
 gggccaggca cgatgccaca ccacagccc aagctgcagc ggtagtgaca cagggtgcaca 300
 gtgaggcgaa ggcgatccg accggcatgg tgatgccgag cacaggcaaa gaaaccctat 360
 gtttcaacac aaggcataca tcatgtaaatt gtttcgctcg aaca 404

<210> 1085
 <211> 326
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F1

<400> 1085

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tagtgattta gtgcactgat atgttcttca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaag gggccgcccc aaagggttcaa acctaactta cccttgaatg caacttaaaa 300
cctcttcaaa agggtcacca aaatta 326

<210> 1086

<211> 375

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F10

<400> 1086

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ccaagtgccg tttttcttaa gaacgagcac cagattagcc aaccactcag ggtgaaatac 120
ttcgacgata aaccacgacg ccaacagtcg ggctacctcc tccccaatgg ccttgcgctt 180
ttctttgtta aagcgacgga gaaactgctt gaccggttta aacttgggat caatattgag 240
agtgtgctca gcaagttccc tcggtacacc tggcatgtca gaaggcttcc atgcaaaaat 300
gtcctgggtc tcacggatga actcgatgag cgcgctttcc tattttggat ccaaattggt 360
gttgatgcta aactg 375

<210> 1087

<211> 364

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F3

<400> 1087

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tccgagggca ccaagggcgt caccaagttt acctcctctt agatcgcgtc gcctgtatct 180
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 caagtaatat tagtcctact gttggaaaaa aaaataaaaa tatatggtaa aacatcaatc 300
 aagacacaac aaggaaagca ataacaagac atcaatatat ggaactgccc aaacaatcaa 360
 gaac 364

<210> 1088
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-024-Q1-E1-F4

<400> 1088

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 taccacaatc atccttggtg tacacacctt ttgagagagc catacatgat ttagaatttg 180
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 gcttcactta gattatTTTT gagtcttaaa tagcatggtg aattgcttaa ataatcctaa 360
 tatgctaggt attcaagatt agtaaaaact ttcttatgag tgtgttngat actaagagaa 420
 gtttgatg 428

<210> 1089
 <211> 390
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F7

<400> 1089

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 ctactgaccg cgaaggcgag aaggtcagag aaggagccca gcagagcaac aatcgaatga 180

agcaggacat ctggtaggtc ttcccaatct ttatgtccag acatggcgag gacgcaacac 240
acaacagccc tttcttgctg tctgcaggtt gcagcttccc ttgaggagtg aatatatatg 300
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agcaaaatgt gatgacacaa gaatcatgac 390

<210> 1090
<211> 460
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F8

<400> 1090

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cccggaagcc cagcctactc gccgtcctcg caaggcactt cttcccacag ctgtcggcca 180
atgttggagc cggagtcgag ctggagaggg gcaacatctt caggtacacc ctccggggga 240
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tcgccgacaa gaacttcaag ccgaggagga agagcggcgc catcgagctc gcctggacca 360
tactcgactt cagaaagggc caggacgtca ggatgaaggc cggctacgag ctataccgca 420
agatgcctta tttccagctg atggagaaca actggacgct 460

<210> 1091
<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F9

<400> 1091

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accttttcgc ttcaacctcg ggaccctaga gttcggagtg tgtccgaata ccttctcggt 180
taagaaacaa cctgggtatg catggagacc aggcgtaggg gtcattagtg ctttatcaga 240
caagtgccca actagttatg ttatattaca tggtagtaa gaaacatctt ccaggagaaa 300

tagttccgtt aagggttccct ttccctggga ggcattgccct aaagtgcattg tccggactgc 360
gaaaagagca gaaaaacatc tgggggcaga taaataagta tggaaaaatc aacct 415

<210> 1092
<211> 399
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-G1

<400> 1092

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tgacaatgga gttgtctggg aggttgaggt aaagtaggac ttacatcctg gggagtttga 120
gggtaaaagg atcaagattt actacagttg cttcacaact gcataacttg tccagaaatg 180
aagatcagga tgatgcactc tcatgaagca tcaacttgag ctcaaattgg gcagggctta 240
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cacttgcttc acaaacatca tttctgtcca gaaacttgga ataattatgg tgggtcaaag 360
gatcaatgaa atgatgcaa aatgggtgga gagatgttt 399

<210> 1093
<211> 391
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-024-Q1-E1-G2

<400> 1093

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cgaggccttt tttttttccc tcccggtcgc aatcgatcc tttccccacc tcaagctcaa 180
atgccccaaag ttcagggtcag gtgctccgaa ccttcagtca tgtccggatc tagccttcaa 240
ggccgatggg tgccttcttc cgtcacggaa gaagtcgtca aaacgttgag ggaggccaga 300
tatctgaccg ccgagattct gcacgactg cctccccggg ggcattccat cncctcctcc 360
gaaccaacg agagcgtcgt gttcgtctcc c 391

<210> 1094
 <211> 301
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-024-Q1-E1-G3

<400> 1094

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tgctgctgct ccttttgttt gggatctcat ctcggtgtaa cgctgcaacg ttatatgtcc 180
caagtaaact ttgagatagg cttgtcgcca atttttgcta ttaggtgagt cgtgaataat 240
tatgaacttc ctctgtgcga gtgaagtgag gtgactggaa ttaacgtac ccctgtggat 300
g 301
  
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<210> 1095
 <211> 387
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-G5

<400> 1095

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gagcttcacc ggcgccatgg ttgtgctcgg aggaggactg ccgatgctcg ccgctgctgt 180
cgtccacatg ctctctctca cgaccacggg tggacgttgg ctgaggtcta gcctcccatc 240
cacgcgcaga ttatgcaaga atctgcttgg tctgcatatt agtaccgact agcgagcaca 300
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tatttgacca gtactacgcg cggcccg 387
  
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<210> 1096
 <211> 383
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-G6

<400> 1096

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gtacacgctc ggctacaaga ccgtcctcag gaccctcagg aactccaagg caaagcttgt 120

gaccccttgc aacaactgcc ctccgctccg caagtctgag attgagtact atgctatgtt 180

ggcgaagatc actgtccacc actaccatgg aaacaatgtt gatttgggaa ctgcgtgtgg 240

taaatacttc cgagtctgct gcctgagtat catcgaccct ggcgattccg acatcatcaa 300

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catctaaggt ggttctagag tgt 383

<210> 1097

<211> 190

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-G7

<400> 1097

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gagatcataa tggctaatacc ctagaagtct agcctatgtg ggtatggtaa tgagtacatg 180

tggtgtcctt 190

<210> 1098

<211> 371

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-G8

<400> 1098

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agcagctgcg taggatggac ctgatgaagg agacggtgag gatgggtgctc gatgcccttg 120

agagtgctga ctgaataatg gctgatcgat agtgattggt aaactggttg aagggggaaa 180

tcagtctttt tgtttctaga tagactatat gtgggttaatt acttacttcc ctggacaagg 240

ttgcagttgc ctccatcaaa attaggcata gaacatggag tgatgggtctt ctccttggtta 300

ttgttcatgg atcattgtat tttgggattc ttaggtgcta acttgtgggt tatatgctat 360
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<210> 1099
 <211> 324
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
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 <400> 1099

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 gaagccctgt gacatacgac aagaaggtct tggagacaat agggaagaag ctgaagaaga 180
 ataatgttgc ccttgacgtt gttgattttg gtgaaactga tgatgaaaag cctgagaaac 240
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 cggggtgaca tgccctttct gatg 324

<210> 1100
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-H1
 <400> 1100

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 ttcctaccaa tctatcccc taggatcatg cacgtagtgc ttggtttttg atggcttgta 180
 gatttttgca ataagtatgt gagttcttta tgactaatgt tgagtccatg gattatacgc 240
 actctcacct ttccatcacc gctagcctct tcggtaccgt gcattgccct ttctcacatt 300
 gagagttggg gcaaacttca ccggtgcac caaaccccgat gatatgatac gctctttcac 360
 acataaacct ccttatatct tctcaaaac 390

<210> 1101
 <211> 137

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-024-Q1-E1-H5

 <400> 1101

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 tcgtctccga tcgactcgag gcttgtcgaa tctctcttca ccaccgctc aagatgcaga 120
 tctttgtgaa gacactg 137

<210> 1102
 <211> 344
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-A2

 <400> 1102

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 ttgctggtga tgttgttgtt gccgttgtt ttgttgttgt tgetgttget gttgctggtg 180
 ttgttgttga tgttgttgtt gatgtcgtt ttgcagtagt tgttgttget gttgttgtt 240
 ttgttgttga tgttgatgtt attgttgtt ctgctgcagt tagctgctga tgttgctgac 300
 tgatgttget gttgttget tagaagttgt tattgctgtt tggg 344

<210> 1103
 <211> 396
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-A4

 <400> 1103

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 ccccaagatt gcgcagttcg ctgagcggaa tccggacgtg ctgttctcgc aagtcaacta 120
 cgagaagcac aagtccatgt gctacagcct ccatgtccat gtctctcctt tcttcaggtt 180
 ctacagggga gccagggca gggtcagcag cttcagctgc acaaagcaa ccatcaagaa 240
 gttcaaggac gccctcgcaa agcactcgcc ggacaggtgc agcctcggcc cggcgcgggg 300

gctcgaggag gcggagctct tggccctggc ggcaaacagg gacctggaat tcacctacaa 360
cgagaagccg acgctggtgc cgatcgccga ggctat 396

<210> 1104
<211> 370
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-A5

<400> 1104

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gcaaatttgt ttgattataa tatgcctatg cataggaagt atgttagaat tagatgtggt 180
tgctctgtgt ttcattgatgc tctctttgtg cttcaatttt tgctcttcat gtgagcatca 240
ttaaaattat caatgcctag ctaggggctg taaacgatag cgcttggttg gacgcaaccc 300
aatattttcc cttgctgtta ttttaataaat cttgcgtcta ctttatgttt aaatgttttt 360
ttatcttttta 370

<210> 1105
<211> 435
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-025-Q1-E1-A8

<400> 1105

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cgcgtagctc catgcacaag cgccggggcca ccggtgggaa gcagaaggct tggaggaaga 180
agcgaaagta tgagctcggc cgccagccag ccaacactaa gctttcaagc aacaagacag 240
tgaggagggt ccgtgttcgc ggaggtaacg tgaagtggag ggctctccgt cttgacactg 300
gtaacttctc atggggtagt gaggctgtga cccgcaagac ccgtctcctg gatgtggttt 360
acaattcgtc aaacaatgag cttgtgagga ctcnagacct tgtcaagaat gcattgtgca 420

ggttgatgct gcccc

435

<210> 1106

<211> 412

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-B4

<400> 1106

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ggtagagcta aatcatgctc atcgtgaccg tgcggcgacac tcggcagggg ctccaatccg 180

tcgaagatga agtctccgag gatgtccgac gtgtagttaa agcttccaaa cctaacctgg 240

tggccagggg cgtaactctc gatctgctcc agatggccaa gcgagttggc ccgcagtgcg 300

aagccgccga atacaaagat ctgtccaggg agaaaagtct caccctggac tgcacgcta 360

tcgatgatca aaggagccat caagccta atgtgacgaca cagaggaact ct 412

<210> 1107

<211> 358

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-B5

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ccctcacggg ccgcaccgct ggccgacct gatcttctgt gaagggttcg agttggagca 120

cgctgtcgg gacccgaaag atggcctccg cctcctccgg gatgctgcac gacgtggctc 180

ccctccctcg tctgctgctg ccgcccacct tgtcacgtcc tttgtggcca tcggcaactt 240

cgcaaagggt tctgagacgc tccacctcat gatctctgcg ggatgtcctc cagctacgtt 300

tgtctaccag cgagatcaag ctgcgtgggt atgcataga tgtagtcact tacagcac 358

<210> 1108

<211> 390

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-B6

<400> 1108

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ggagacgtac aagatctaca tcttcaaggt gctcaagcag gtgcaccccg acatcggcac 180
ctcctccaag gccatgtcca tcatgaactc cttcatcaac gacatcttcg agaagctcgc 240
cggggagtcg gccaaagctcg cccgctacaa caagaagccc accatcacgt cccgggagat 300
ccagacctcc gtccgcctcg tctcccccg cgagctcgcc aagcacgccg tctctgaggg 360
caccaaggcc gtcaccaagt tcacctcatc 390

<210> 1109

<211> 431

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-B8

<400> 1109

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accatggaac ctgcatctgc ggcattgccg gaggtgatca caagtaactga aggaaagcct 180
gacccgcttc ttccaatcac aagtagcccc gagaactctt cctgggacag gtggttccag 240
cgcgtgcgaa gctcccgag caacaaatgg tggcaatcca aaggctccga ttttgctag 300
ctttcgccga agctgagaca agctgtgtgc agattgaatc tccctgac cgtatggtcc 360
atccatggat ggcttgga cagaatacaa ccagttttt cctgagaatt gttgtgtatg 420
taatccctaa c 431

<210> 1110

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-C2

<400> 1110

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 aacgatggtc gcggcgccct ctgtgagtca tggtcggcaa cgggagtcag ttcattgtcc 120
 acgacgggtgg tactttctgcg cttggcatcg gctttcgaga agcagatcga agaccgtgga 180
 agacgatgcc ggggaagagg ctctgtgtac gacgacgatg gtggaccggc tccagtgcgg 240
 cgtacgaggt cgtcgatgag gcagatgcgc tgcggtggac gagtgcgccg atgtaaaggg 300
 gaggagcacg aaggctgcgg tgccgtggag aagtctattt tgcggtgggg atagaaaatg 360
 gggagtattc aggtgtacta ctctgggtgc cgggggtggg gttggttggg tagggtgaaa 420
 cctgaagtta cgaaaacagc ccccta 446

<210> 1111
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-025-Q1-E1-C5
 <400> 1111

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 accaccgtcc atagctctca tgtgaatgtg gcaaggccac aaaacaagtt ttccatcgcc 180
 agatatccaa cagatcaact ggtgttatgg atgcgtctta aagatatttt tttgtcattt 240
 caaacatcaa acaccaacta ttcacaatgg agacacagcc gtttcaattc tcccaggtaa 300
 aggaaaggtt cgcccatggc tccgtcgcag cccaagtcgg gcctcttcgt gggcatcaac 360
 aagggccacg tcgtcaccaa gcgcgagctg ccgccgcgcc cg 402

<210> 1112
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-025-Q1-E1-C6
 <400> 1112

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aattatttttg tgaaaaaaaa aaaaaaagaa aaaaaaaaaa aaaaaaaaaa aaaaaaaacc 180
ggccgcccacaa aaggatcaaa cctaacttac ccttgaaggc aactccaaac ccctccaaaa 240
gggccaccaa aatccaatcc acggggccgcc gtttaaaaac gccgtaacgg gaaaaacccg 300
gccgtaacca aactaaaccg cctggaacaa aacccccctt ccgcaaccgg gcgtaaaacc 360
aaaaaggccc gaaccgattg cccttccaaa a 391

<210> 1113
<211> 447
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
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<400> 1113

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gagctgcacg agcacgagct cttgctgacg cgccgccccca ggccgtacgg ctgcgacggg 120
tgcaagaga tgggcacctc ctggctctac aactgcgcgg agtgtgactt cgatctgcac 180
accaagtgcg cgctgggtga ggagaagaag ggagaggagg tgaaggggca ggaggatgct 240
gctgccccag ctgggtacgt gtgcgagggg gacgtctgca ggaaggccta ggtagcgttg 300
tggtgtgtgt gttcctttcc agctgaagcg tgtctgaatc atgtgctgtg tgggtgtgatg 360
ataaataaat cttgcatccg atgggttggc ttgggaagta gtatttgtcg tggtgacatt 420
catgtgcaaa gtcgtctgag tatatgg 447

<210> 1114
<211> 383
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-D5

<400> 1114

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ggatgagtgt atgcgcgtgt atatgagcgc ttgtgtctgt actgatgctt aaaaaaatca 120
tttgctggc cagtcgttga tttcaaacac cacaatctga ttagagccgc atgatcgcgt 180
cctaacatgt tcagagtccc cctcacccaa aaaaaaaca tggtcagagt cccccgtagc 240

aattccaacc agcaggaatg cttgccaact tgcaccagcc atgcagcacc tcgtcgtggtg 300
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 gagctcagag tttcaacacc ggg 383

<210> 1115
 <211> 431
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-D6

<400> 1115

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 ttcggtcctt ttcgccttat gttcttcttc taaggactca cacttgccggg tgggtgtcctt 180
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 ttgtaccttg c 431

<210> 1116
 <211> 391
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-D7

<400> 1116

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 aaacacggtg tctgcaaaca tccccatggc ccctctcttc gggctactca agcccaacgg 180
 caagatggtc atggtcggcc tcccagagaa gcctatcgag gtccctccct ttgctctggt 240
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391

<210> 1117

<211> 384

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-D8

<400> 1117

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tacattgctg gaggagccac gcagaactct atcagggttg cccaatggat gcttcaaact 180

cctggtgcaa caagttacat gggttgcatt ggaaaggaca agtatggtga ggagatgaag 240

agcgccgcta aagctgcagg agttactgct cttactatg aggatgaggc tgctcctaca 300

ggcacatgtg ctgtatgtgt tgttggtggc gaaaggcat tgattgcaaa cttatctgct 360

gcgaactgct acaaactctga gcat 384

<210> 1118

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-E10

<400> 1118

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gcttgctgtt tttgatgctg ctatgaaata caagaacgaa gggcatgaca ctatcatcct 180

ggctggtgct gagtatggca gtggaagctc aagggttgg gctgcaagg gtccaatgct 240

tcaggagtg aaggctgtga tagccaagag ttttgagagg attcacgta gcaatctcgc 300

tggaatgggc atcgccctc tatgcttcaa ggctggggag gatgccgaca ctcttggtt 360

aacaagccat gagcgctaca ccatccagct tccgactgat gtgaatg 407

<210> 1119

<211> 409

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-E3

 <400> 1119

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 atataactac gcacttaaga taccatgggc attggcggaa gcgtaatacg gacaagtctg 240
 caagcactcc ggtaacattt ttttctactt tcctttttct ttcttcatta cctcttaaaa 300
 acagggtggcg caaaggagaa acatctaaaa ccgactctat cggagttcag atctgtacac 360
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<210> 1120
 <211> 370
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-E5

 <400> 1120

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 tagtaggtga ctatagactt gcaagatagg atcaagaact cacatatatt catgaaaaca 180
 taataggttc agatctgaaa tcatgtcact ctggccctag tgataagcat taagcatagc 240
 aaagtcatag caacatcaat ctcagaacat agtggatact agggatcaaa ccctaacaaa 300
 actaactcga ttacatgata aatctcatcc aacccatcac tgtccagcaa gcctacgatg 360
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<210> 1121
 <211> 404
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-E7

 <400> 1121

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 tagcactcat gtttactttc gcactgagaa ctgaaaaact gaatgtaaat ttagtatgga 180
 tgccgtgtat gtggaccttg tgttgtaatt ccgtttaaag cactaggcga aaaacaaaaa 240
 aaatatatat tatgcatgta atcctcgagc attgactatt aatgtcttct gttagctata 300
 aaaaaaaaaa aagaaagaaa aaaaaaagcg gccgctcgag aagatccaag gcttagttag 360
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<210> 1122
 <211> 323
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-025-Q1-E1-F10
 <400> 1122

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 tggatctcat agtacttatg atacataaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa taataaaaaa aaaaaaaaaa aaaaaaaaaa 240
 aagcggccgc ccaaaagggt caaagcttac ttaccctga atgcaacttc aaagcccttc 300
 aaaagggtca ccaaaattca att 323

<210> 1123
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-025-Q1-E1-F2
 <400> 1123

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 agacaattgt acttcgtcaa catgtgccat ttgcttgga gactacagtg ttgggtgaaaa 180
 gataaggggtg ctgccttgct gtcacaagtt ccatgctgct tgcgtggacc tgtggctcac 240

atcatggagg acattctgcc ctgtatgcaa gcgagatgca aatgctggaa tgtcaaattt 300
 ccctccatca gagtctaccc ctttgctttc ttctgctatt cccttgccag ctgaatcgac 360
 agctttgtct tcttttcgtt caatggtagc agcatctcct ccaaggacaa taaccggca 420
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<210> 1124
 <211> 351
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-F3

<400> 1124

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 atctaatttg tgagttcaga atgctcatgg agaagttcct cgatgtgtac tactcgtact 180
 gcctcacgca tacaactcgc atcctcgtaa cgctctaaa tgccctggtg ctccataagt 240
 agcatcctct gtggggcctc accatctgac tggacgtgtt cgtcgtccta aagaacacac 300
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<210> 1125
 <211> 356
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-F5

<400> 1125

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 ccagcccatc aaggagtctg ctctggggaa catccctacc attgccttct gtgacactga 180
 ctctcccatg agatacgtcg atatcggcac ccagcaaac aacaagggga ggaacagcat 240
 tggctgtctg tactggctct tggccaggat ggttctgcag atgaggggca ctatcctgcc 300
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<210> 1126
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-F6

<400> 1126

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agccctccgc cgccgccccg ccttcagctc tctccttcct tctccgatcc aagatgaagt  120
tcattgctgc ctatctgett gcttacctct ctggcaacgc cagccccctct gcagaggacc  180
tgacatccat tcttgagtct gttggttggt aaatcgacaa tgagaagatg gaactcatgc  240
tgtcccaagt gaagggcaag gacatcacgc agctcttggc tgctggtagg gagaagtttg  300
ctgcgggttc atctggtggt ggtggtgtgg ccgtttcagc tgctgcccct gctgctggag  360
gtgctgctgc ccctgcagct gagtcaaaga aagaagagaa ggctcgtggag aaagaaaaga  420
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<210> 1127
 <211> 422
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-F7

<400> 1127

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aggtttatta aacacagaag aagaaagcaa gaaaaagaaa ctaaactagc atggatatta  180
cagtgaaaga gtatgagcac cgacatctaa caatgagtgt gtgaacataa atgtaatgtc  240
ggtagggaaat acgtactccc ccaagcttag gcttgaggcc taaggatgtt tattgccacg  300
gatggcctgg cggatatcca tagttgtagt tggggtcgta ctgagatgca gtggtcattg  360
catcgtgtgc tgcagcttgg aggcgagctc tctcagccct cctcctatac tctgcctcct  420
ct                                     422
  
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<210> 1128
 <211> 441

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-G1

 <400> 1128

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 cttgtcttct tgtctcagcc gcccaaagta gcgcccgtcg tgccgcatgc tcctgcctcc 180
 cgtggccggc tgtgctgccg cggaggcctc accgccccta ctattccac tgctggctag 240
 gccctgcggc gacgacagcc tcaaaccgta gccgaaccaa tgaaccctcg tactcctctc 300
 cacgcgggct tccactgccg ggccttcccc ggctccgcgt cggtccttcc ctaggcctcg 360
 ccgtcgtcca ccgccgtggg tgctctccgc gtgggctggc caaatgggc aaggaacaac 420
 ttcaaccgga aaagtactac a 441

<210> 1129
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-G3

<400> 1129

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 aaatattgaa agaaatatca ataagaagca aaatataaaa gtcccataag aaaaagggtga 180
 gaacccttcc tcggaaaaga ccggtaaaac ctgcaacacc gaaaacatca tagaagacgc 240
 atgcgaactc cgttttcgat gaactcaagc ttgtcatcaa gatgaccata agctctaaga 300
 ctcaaaaga taaccaaaca agaaccaaga aacatgatgc aaggatgcaa tggtttgagc 360
 tctctactac cgacacgatc gagctaacaa acttagagcc cccc 404

<210> 1130
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-G4

<400> 1130

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ccaggacgcc cagggcgcca ccatctttca tgttgctgct tcaagggggc caagttgagg 180

attgctgcta taagttggtc ttatgaacat tcaacatgcc atccagggtg taattctgct 240

tgtacctcc ccttcttcc acatctcaat tccctctccc atgcttcttt tctctaagag 300

ctctctcttt cttcaatttt ttctgcagag agatggccat ggttgcccga tgcccagcg 360

tcgccggcca aggaccgctc ggcgtctaga cccctccacg ccatcccatc tcgccaaaga 420

cctgcaccaa gtcccgtcca gag 443

<210> 1131

<211> 437

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-G6

<400> 1131

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gtacgcgatg atgtccatat tccataactg aaattgaata ttccaccatt tgagggtaga 120

tatgttcctg atatatatgt tacttgggag ttagaaactg aacaacgatt tacatgttta 180

caatatacctg aggagagacg agttgctgct gctgtttgtg ctttcactag ttttgcttgt 240

gtatggtggt ctgaacattg tagattatat cctattccaa ctacttgggc tgctttgaaa 300

actgctatgc gtacgcgttg ggttccacca tattatcaac gtgaattgct tcaaaaattg 360

tagcgtttaa gacaaggaa aaattttgta ggaagaatat tatcaggaat tacagactgg 420

catgattaga tgtggta 437

<210> 1132

<211> 431

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-G9

<400> 1132

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 aagagcgtag ctggcaggac cttcatactg cttcggaggc atgccgtctt tttcgtgcaa 120
 acgttgacag tcttcccgtg cctcagggtg atcttttctg tttccataca cgcccaagaa 180
 gcctagcagg ttcaacgcaa ggttcttcgt cacgtgcac atgtcgattg aagagcggac 240
 atctaggtct ttccagtagg gtaggtccca aaataaagat ttcttcttcc acatgggtgc 300
 gtgtccctca gcgtcattcg gaacaggtag tccgccggga ccctttccaa agattacgtg 360
 taaatcattg accatagcaa gtacgtgatc accggtaccc atggcgggat tcttccggtg 420
 atctgcctcg c 431

<210> 1133
 <211> 372
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-025-Q1-E1-H2
 <400> 1133

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 gttgttggtg ttgttggtgt tggttggtgt gttgttggtg ttgttggtgt tggttggtgt 180
 gttgttggtg ttgttggtgt tggttggtgt gttgttggtg ttgttggtgt tggttggtgt 240
 gttgttggtg ttgttgctgt tggttgctgt gttgttggtg ttgttggtgt tggttggtgt 300
 gctgtagttg ttgttgtagt tggttggtgt gttgttggtg ttgttggtgt tggttggtgat 360
 gttgttggtg gt 372

<210> 1134
 <211> 411
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-025-Q1-E1-H5
 <400> 1134

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gccactgtca actgtgctga caacactggt gccaagaacc tgtacatcat ctccgtgaag 180
ggaatcaagg ggcgcctcaa caggcttcct tctgcctgcg ttggtgacat ggttatggcc 240
actgtcaaga agggaaagcc tgacctcagg aagaagggtca tgccggctgt catcgtcagg 300
cagcgcaagc cgtggcgccg aaaggacggt gtcttcatgt actttgaaga caatgctgga 360
gtcattgtga acccaaaagg agagatgaaa ggttctgcca tcaactggacc g 411

<210> 1135
<211> 374
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-025-Q1-E1-H7
<400> 1135

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tctgggtaag tatgtccagt ccacgtccca cctgactaac tcatcacatg ttcattccata 180
ggcatcatca attggtttca gttaccagca gtagtgaagg aattgctcga tcgggttcag 240
ttaacagcca ttgatcgatc gctcgggttc agtaacgcgt agcctgcagt gcaatcgctt 300
gggttcagtt acagcccaat gcctcgctcg gggttcagtt gagccaaactc ctcgcacaca 360
cgcgcgatatg tgta 374

<210> 1136
<211> 430
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-026-Q1-E1-A1
<400> 1136

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atgttggata taaagatcgt ttgggtaaga agtataacgg aaagaaacta tatgcttggt 120
tgtttaagaa gtgttgcata cttgtgtgag ttgacgcgac acatcaaagt agtactgtac 180
tactactagt agtactccct ccgatccctaa tttctctgcg cataagtcga ggtgcagata 240

ccaaggaggt cttgcttgtg tctatacttg gacaactcat ccaactgcg actangcaga 300
cgaagctcgt gtcgtgttg tgccgtgtgt ctccatctta gcctccgtgt tttagacttc 360
tcaatctcaa ggccaaggag caacatgaaa cctatgatag agcaaatcgg atggtttaga 420
acactacaat 430

<210> 1137
<211> 374
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-026-Q1-E1-A10
<400> 1137

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ggcgggcata gaaggtacca agacggaaga tgtcatggcg ggcatagaag gtaccaagac 120
gggagatgtc atggcgggca tagaaggtac caagacggca catgtcatgg cgggcataga 180
aggtaccaag acggaagatg tcatggcggg catagaaggt accaagacgg aagatgtcat 240
ggcgggcata gaaggtacca agacggaaga tgacatggcg gacatagaag gtaccaagac 300
ggagaatcca agcgacgaat aaatcagtgc atgaacggag agtagatatg gcgccacttc 360
tttggtggcc ctga 374

<210> 1138
<211> 406
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-026-Q1-E1-A11
<400> 1138

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ctgtgcagag cactccttcc acagctactg ccaatgcata ccattacagc ctatctcctt 120
gctatgcttc ctggacccat tacatgctta acaagaatgc atatagctac tatcctgcac 180
ctaatacagga gcacaccac cctttcagcc ttgataacaa ccaggctaaa gatccagggt 240
ctatacccag ctttgggatt gagtcattta atacaacatc cctggcacca aacatgtctg 300
ctcatatgcc tcccatggaa ggacccctac ctacaaagga acctgaggct ccagaggaca 360

tgctgctag agtagctaca attaatgatt aaatggatgc caaaaa

406

<210> 1139

<211> 294

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-A12

<400> 1139

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gccgggtggc cctgtcagtt gatggctcat tcctgaagga ggatggctct gcagctgtcg 120

gtatggtgct tataaacgac aaaggagatg ttcaaagga agcctaccgc ttcattctct 180

actgcaatga cccgctggaa gcagaattac atgcgatcat gcagtgtttg gccctatcaa 240

tacaacactc tgatttacgg gtggtggttc aatcggactc ggctgaagct ttgt 294

<210> 1140

<211> 388

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-026-Q1-E1-A2

<400> 1140

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tanggtccca cttcagatta acgttgtctg tcttgatcatg cttcagcctc gtgcgcgtac 180

accttagcgg agctgtcca acgacggaac cgtccatcac agcggagcag taccctcggc 240

gccgtttcca gaggcctcgg atcttcttcc ccgcctccga cagtcacacc agcatcatca 300

ccatcctcca cgtccaaccc aatgatgctg aggtgcacaa ggctatgcca aagaggttgt 360

acactcgtcg catcactttg tttctcca 388

<210> 1141

<211> 425

<212> DNA

<213> Triticum aestivum

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<400> 1141

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gcgtccagcc gaacgtgacc atctacatca ataacctcaa cgagaagatc aaactcgaag 120
cacttatgaa gtccctcaat gccgttttct cccagtttgg gaaaatcatt gaggtgcttg 180
ctttcaagac tttgaagcat aaagggcagg catgggttgt gttcgaagat gttgcatcag 240
caactgaggc tttgaagagg atgcaagatt ttcccttcta tgacaaacct atgaaaattc 300
aatatgccaa gaccaagtca gatgtttagt caaaagctga tggcactttc gtacctcgag 360
aaaaaaggaa gaggaatgat gagaaacctg agaagaagca gaagcgtgag cagcaccatg 420
atggtt 425

<210> 1142

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-A6

<400> 1142

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ggatgcctcg ggaaggcatc cctcttttcg tcttcgttca ttggttaactt tacttggagc 360
tatattttta ttccccacat gatatgtgtt tcgcttggag catcttgcac gatattagta 420
tttgcttttt agtttaacac aatcat 446

<210> 1143

<211> 403

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-A7

<400> 1143

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 ctacaacccat cgatcactat tctcttctca tttttgactc ctctccattt tctactcttt 180
 aggaaggtgg atgcaaggaa caagtttaca caaccggagg aagaatcacc ttttgacga 240
 cacctgaaag aagtcactag gtacctgaac attggaatgc caagcttcac cgggacttac 300
 aatgccacat taccaaaaga ggagcgatgg atgattcaag ttcaagttcc aggaaggacc 360
 ttcacggcag tcactaaacc catagagttt tccttcgatg cac 403

<210> 1144
 <211> 418
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-A8
 <400> 1144

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 acatcggcac ctctccaag gccatgtcca tcatgaactc cttcatcaac gacatctttg 180
 agaagctcgc cggcgagtcg gccaaagctc cgaggtaaca caagaagccc accatcacct 240
 ctagggagat ccagacctcc gtccgctcgc tctccccgg cgagctcgcc aagcacgctg 300
 tctccgaggg caccaaggcc gtcaccaagt tcacatctc ctagactgac gacgcgcgcg 360
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<210> 1145
 <211> 380
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-B10
 <400> 1145

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 tcaactacga gaagcacaag tccatgtgct acagcctcca tgcgatgct ctccttttct 180

tcaggttcta caggggagcc cagggcaggg tcagcagett cagctgcaca aatgcaacca 240
tcaagaagtt caaggacgcc ctcgcaaagc actcgccgga cacgtgcagc ctcgggcccgg 300
cgcgggggct cgaggaggcg gagctcttgg ctctggcggc aaacaggggac ctggaattca 360
cctacaacga gaagccgacg 380

<210> 1146
<211> 377
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-B11

<400> 1146

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tctttatgac taatgttgag tccatggatt atacgcactc tcacccttcc atcattgcta 180
gcctcttcgg taccgtgcat tgcccttact cacattgaga gttgggtgcaa acttcgccgg 240
tgcattccaaa ccccgatgata tgatacgctc tttcacacat aaacctcctt atatcttctt 300
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catgcaactt tccaaca 377

<210> 1147
<211> 417
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-B2

<400> 1147

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gggaggaact ctccgcccgc gggctgctgc tgcggccgcg tgtctaccgc ctgatcgga 180
ctggatggct ggataccggt cttcatatgc taccatgata cggacgtctg aaccgttgga 240
tctcagatcc gacggcatat aaggagttgt tgtacctgca cgcaatttca agattcttcg 300
atgatttttt tgtaaaatgt ttaatagctc ataggagccg tttgatctga tatccaacgt 360

taccaagagc ccgtatcacg gtatcaccta aacgttggtgta gcacatgata tttcccc 417

<210> 1148
<211> 423
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-B6

<400> 1148

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tcggggggcga gatgagctac ctcgagaacg tgatcagggg gaaacaagct gagcgctacg 180
gcctatgtga caagctcgct catgctcaga gcctgaaggt cgtggaaggc ggatccacct 240
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gccgtgggggt tctgctctag tggtgctggt gagctcgagt gttatgtcag gttcaaatat 360
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ttt 423

<210> 1149
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-B8

<400> 1149

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atagacacga gctagatttg agaaagtcag tcaaacgaat ctgtaaaatt aagaattcat 180
gcttgctgga tttgtaagca attagttgat ccaccaaacg agaaagagca ttgacagcat 240
taaattgcag aagaaaaact aacagcaacc caaatcacc caaatcactg gttgattagc 300
aacaacaag acgcgcgtgt gtggtaatc aaagaagaaa cggccctgca gacgacggcg 360
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cagacct 427

<210> 1150
 <211> 366
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-B9

<400> 1150

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 atgacagtcc ttgacatctt cgtctgcatc ctgccttca tgccaactgg atggggcttg 180
 cttctgattg cccaagcgat caagcctgtg gtcgagatgg tcgggctgtg ggggtctgtg 240
 aaggctctcg cccgtggcta cgagattctc atggggctcc tgctgttcac gcccatcgcg 300
 tttctcgcgt ggttccccctt cgtgtccgag ttccagacca ggatgctctt caaccaggcg 360
 ttcagc 366

<210> 1151
 <211> 402
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-C11

<400> 1151

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 gctcgtctaa tctcgaatc tctctcccc gtttcagatc tacgcgcgcg aggttcgggtt 120
 cggctcttcg agctcgagac atggcggagg agaatgcccc agttgagggt gctgctccgg 180
 ttgcggtccc taccacagtt cttggagagc ccatggactt gatgactgct ctgcagcttg 240
 tgatgaagaa gtcaagcgt catgatggcc ttgtcaaggg actccgtgaa gctgcgaaag 300
 cgattgagaa gcatgctgct cagatctgtg tgcttgctga ggactgcgac cagcctgatt 360
 acgtgaagct ggtgaaggca ctgtgtgctg agcacaatgt tc 402

<210> 1152
 <211> 412
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-C5

<400> 1152

ggtcagggac tcccgggtcg acggaatcct gtagagtttt gtgttgtagaa gttttcaagt 60
tttgggtaaa gcttttatgg actatggaat aaggagtggc aagagcctaa gcttggggat 120
gcttatggca cccaagata ttcaaggata gccaaaagcc taagcttggg gatgcctcgg 180
gaaggcatcc cctctttcgt ctctgttcat tggtaacttt acttggagct atatttttat 240
tccccacatg atatgtgttt ttcttggagc gtctgtatt atattagtct ttgcttttta 300
gtttaccaca atcatccttg ttgtacacac cttttgggag aaacctattt gattagaatt 360
tgctagaata ctctatgtgc ttcacttata tcttttgagt ttgatagttt tg 412

<210> 1153

<211> 431

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-C7

<400> 1153

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agaaccagaa cttttcaaga aggagatttg gtgcttcggc tcatccaaga tcagacggat 120
atgcacaagt tatccctacc ttgggagggga cctttcgtgg tcagcaagaa tctgcacaat 180
gggtcgtact atctgattga tattcaagag cataaagact cacgcacatc agaggaggag 240
accaacaggc cgtggaatat agctcatctt cggccttact acacttgagc catcggtctt 300
atctatgtac atactatggt agtgtatata ttatcattga tataataaaa cgggagcctc 360
agctaaagcg gggctctctgt tctttcatat catgtgtggt tacatggagt ggttccgttt 420
taaagcgggc t 431

<210> 1154

<211> 405

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-C9

<400> 1154

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 ctgagccttt gcataatctt tttaggggtt ttgctttggt gaatttgcgg ttgcatcgtc 120
 gtgtcaagtt gctgggtctta gagtctagtc ttttagagtt tcgagttctg gtcataagtt 180
 gtcacgctgc cgccgcacca tcatcatcgc cttgccatct accaccattg cttatccgcc 240
 accgctttga atccgtatcc atataccacc accaatccgt atccatatac caccaccgat 300
 ccgtatccat ataccactac cgctaccata taccaccacc gctgccatat cctaccgcca 360
 tatatccacc accaatccga gttcctttca tattcggttg gtttt 405

<210> 1155
 <211> 384
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-D2

<400> 1155

gggccgacgg ctgtttgaac tgtaaaaaat tcttgtgttc ctccatatac ggagccacca 60
 aggcggaatt ctgtagaact gtgtagtggtg cttcagtgag agaatgcccg tccatacata 120
 ttatttgatg cctccttagc gtgccttttc cttccagtct gcccttatgc cgcgattcag 180
 gaacaccaat cggcttaagg ttaggaataa agtcaatata aaactcaatg acttcctcgt 240
 tttcatggcc cttcaagatg cttccttctg gcctagcacg gttatgaaca tattttcttca 300
 agactcccat gaacctttca aagggggaaca tattgtgtag aaatacagga cccaaaacgt 360
 taatctcttc gcaaaagtga acta 384

<210> 1156
 <211> 377
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-D9

<400> 1156

aattccccgg cgcaccgtgc aggtacacga ggtcatgcac gtattctacg tcgccctgct 60
 gtgcaccgag gagcacagcg tgcagcgccc gacgatgcgg gaggtcgtgc agatcctgag 120
 cgagctccca aagccagctg ccaaccaaga tggagaagaa gagcttcctc tctcctgoga 180

aggacctgaa tccaaccctc ctgcctcaac cagttacacc gaggcaccag cgggcgacgc 240
gaaagatcag cagccgcagc agcagcacac aagctcggag tcgtcgcctc ctctgatct 300
catcagcatc tgatcatcca agtaccggga agcatcgccg tccgtcgcaa atatgttggg 360
gcttcctttg atcgtgc 377

<210> 1157
<211> 379
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E1

<400> 1157

aattcacggg ccgacggcgc tagaacggaa gggcaagggtg gtcacggaga tcaaagacgc 60
gattgagcgc cacagcagcg cctatgtctt cacctacaac aacatgagga accagaagct 120
caaggacctc agggaccaac tcaagtcctc tagccggata ttccttgctg gaaagaaggt 180
catgcagata gcattggggc ggtcacctgc tgatgaagct aagacaggcc tgcataaact 240
ctccaagttc cttcaagggtg cttctggatt gttatttaca aatctcccaa gggatgatgt 300
cgagagatta ttccgagaat ttgaggcgaa tgattttgcg aggacaggaa gtattgcgac 360
tcaaacgggtt gagctaaag 379

<210> 1158
<211> 403
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E5

<400> 1158

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cgtcccggga gatccagacc tctgtgcgcc tcgtcctccc cggggagctc gccaagcacg 120
ccgtctccga gggcaccaag gccgtcacca agttcacctc ctcttagatt gcgtcgcctg 180
tatctagtag caaatgcagt tccttctgtg tggtttagtg cttgtctgtg gactctggtt 240
atctgcaagt aatattagtc ctactgttgg atgaaaattg ccgaatcatt gccaatgctt 300
ttttggctcg tcggaacaa tgttcttg tgggtctat ctatactgat ttccgcggtg 360

atttataaaaa aaaaaagtaa aaaaaaaaaaaa aaaagcggcc gct

403

<210> 1159
<211> 418
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E7

<400> 1159

ggtcagggac tcccggggccg acggggccctt catcatttac ttgaccatag tatgtggtag 60
ttgatttget ttatttgttg atttcggact ttgttatttt agggccacct gtgtcatcga 120
cgaggacaac gtggtggcgt cctcaacgtt gaggattgcg gctattgaag cccctaagtt 180
tgggtctacta gggcggggtt ggcagataga gtacactgcc ggaggttgcc gctttggaga 240
tcgttaggta caacatcttt aggtccttgt tcattgagtc cttagggatt ttgccaccg 300
tatagtgtga atcttttcat tcttatgggt tgcaagtgtc atgcctccgg ttagcaatct 360
tgaggccacg aaggcaataa accctaagcc gcaagttccg gatcggctctg ctgttggc 418

<210> 1160
<211> 343
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E8

<400> 1160

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cctccagcat aactgagaca acctcgggat tatcacgcta agcagttcag aattccatga 120
gaaatcacca caagttagtt ggccgtgtgc cgtgcatagg cagttcaaaa ataaagatca 180
cacagtcatg tcccggtttc tctccgtttt cctttcctcg ttggacaccg acattactgc 240
agcaggccct tgaatgtgca agtgctaaac aatgcgacgt ccaatgtaag gtcaaccaag 300
aatggcgaat gggacgcgcc ctgaaagcgg ccactcaaca gga 343

<210> 1161
<211> 379
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E9

<400> 1161

aattcccggg ccgacgggga ggaggagcct gaggaggagc taggaactga atatctggtg 60
cagccgcttg gccgtgctga agacgaagag cattccagtg actttgagcc agaagaaaat 120
ggtgatggtg ctgaggacga ggagattgag gatgatgatg ctgatgatgg tgaggattct 180
gtcaaggcgc aatcctcttc gaagaggaag aggtctggcg cggaggatga agatgatgat 240
gacggtgatg atgatggtga tgatgatgag aagcctccat caaagcgata gtcaatttgt 300
tcttgctgat ctggtatctt ttctgcttgg gccataacg aaaataatcc tcacggagag 360
ggttggttgg aaatgccgt 379

<210> 1162

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-F2

<400> 1162

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tagaatgtgc agcttagaaa tgggtgaaat gccggagcga tgatgtggag atctttgtaa 120
agaagacaag acaatggaat agtaagaaat agaaaatagg gctactgggtg aaatacatga 180
gctgagaagc cgcaaaatag cgctttgctg gttaaccggg ttaaaatatg ttcccattgc 240
ctgtgggatg gggctgaatg cggagactgg ttgtacttca tagggagtag tgtaagtttc 300
actggtagca cctagctagc tgagatttca caattactaa tattgagttt tgaacatggt 360
gactggatta tattgatttc gtatcttgct aaaagcctaa gatgctaagg ggcaaacttt 420
ttgagggcc 429

<210> 1163

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-F3

<400> 1163

acgccgtcag gtagcgggtct agaattcacg ggccgacggc cttggaactg ggaaactcac 60
 ttgccagct tctcagcaac gccagaatcc tgattcactc actatcacca acttgcgtaa 120
 tgcactgaat tttctgtcca tagttgaaga gcttcagagt ttgttcgtac gatatgggtga 180
 gctataacct gcagtcgagg acagttggat gcatgggctg cgtgacaagg tagagctaata 240
 ggtgcctagc aattattcat cdcgagcata tttgtaccaa atcatgtcag tcttgaacaa 300
 gttttgtttt tgcagtgcta ttctgtgat tttccaatcc tatgaaccaa agaaggccta 360
 aacttgctac aaaatctgta ctttcccttt gcgagcgaag gaatacgaac tcctgttttg 420
 caccctatct gcgttggttag cccaaa 446

<210> 1164
 <211> 408
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-F9

<400> 1164

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 ggaatggctt caaccagggg agacgtagga tgggagttcg gccaaaggcga actgataggg 120
 aggatagtgt acggcgaact gtctatgtct cagacattga tcaacatgtc actgaacaga 180
 agcttgctga ggttttctca aactgtgggtc aagtggtaga ttgccgtatc tgtgggtgatc 240
 caaactcagt gatgcgcttt gcttttatcg agttcgccga tgatgtcggg gcaagagcag 300
 ctctaacgct tgggtgaacc attcttgggt tttatcctgt cagagttctg ccatctaaga 360
 ctgcaatttt gcccgtagac cccaaatttc ctctccaac tgagggcc 408

<210> 1165
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-G1

<400> 1165

caggtagcgg tccagaattc acgggtcgac gggaatgcca gtatgtagag aagtgatgga 60
 aagggttgtg ctctttcatt tgagaaactt ccaacaaaa ttggaatgtt agaacagaat 120

atttagatac aggtccctta tgaatactgt actgagtaag attcattgaa gaaatgcttc 180
 tccgaagcaa taagtttgtg gcacaagcat agtcttctgc taacctagcc tttcccatct 240
 ttctattaaa acgaatgtag ctaacgtgaa ctaaaagcaa gctcttggtc gaggaagtag 300
 aaattgttag ttgttgctag cttgaactga gttgttcctg ttgggtgctag ggttgccaag 360
 ggagttgtag cgagatgctg ctaatgcagc tatttctgat gtccggacga tgcagcggaa 420
 gtgaaaagaa aaaggtatga 440

<210> 1166
 <211> 429
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-G7

<400> 1166

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 tgagagcacg gctctcaacg ctgcactgct acgcgtcacc accgacggac caagcacctc 120
 gagtcatgct ggtgatcttg gagtgagagc gcggtctca aggctgcact gctacgcgtc 180
 accaccgacc gacagggcac ctcaagtcac gctggatgatc ttggagtgag agcgcggtc 240
 tcaaggctgc actgctacgc gtcaccaccg accgacaggg cacctcaaac cattctgggtg 300
 atcctggagt gagagcgcgg ctctcaaggc tgcactgcta cgcgtcacca ccgaccgaca 360
 gggcgctca aaccattctg gtgatcctgg agtgagagcg cggtctcaa ggctgcactg 420
 ctacgcgtc 429

<210> 1167
 <211> 395
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-026-Q1-E1-G9

<400> 1167

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 ccaaggggct caaccggcg agcagatcg acacaataaa gaagctgcag ctcggagcct 120

gagtgaggtc tactaccccg tggagatgtc gaaagttgta atcagctgtc atttggtttg 180
 ttttggctcc gtggtgacga ataatgggtg gaaacgcagg atattccccc cttgacgatt 240
 ccgtgtaggg aatgaataat tgctaccaga ttttattctt ttcgtgctat atctagtttg 300
 gtggttcatt gttgatcaaa ananagaaaa aaaaaaaaaa agcaaaaaaa aaaaaacaaa 360
 aaaaaaaaaa aaagcggccg ctctaaagga ttcaa 395

<210> 1168
 <211> 386
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-H1

<400> 1168

attcacgggc cgacgggctt cgtaaagtgg acctaggagc tggagcagag gtacaaggag 60
 gcactcaatg cccaggctct ggttcattgcc ggcaagggtga aagagctaga ggtggagcgg 120
 gacgggctga aggatcaggc cctgaagctg gccaaaggaga atgacacgct caacgggtgcc 180
 ctggtggagg cgcagggtgc agtcctcggc aaggctgagc agttctccaa ggccaacgac 240
 cccatcaaag acctgaagct gaagctggag ggtcttgagg agatgctctc ggaggccaat 300
 gcccgggagg agaccctggc caaggatctg gaggtcgaga agcaactgcg gaagaacgaa 360
 gccgccaacc acaaagattt tgtgga 386

<210> 1169
 <211> 374
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-026-Q1-E1-H11

<400> 1169

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 aacattgagt gcaagcatga gtaggatata atccaccatg gacataaata tcgtgaaggc 120
 tatgttgatt ttgtttcaac tacatgtgtg aacatgtgcc aagttcagtg acttgaatca 180
 ttcaaaggag gataccaccc tatcatacca catcacaacc attttaatag catgttggca 240
 cgcaagataa accattataa actcctagct aattaagcat ggcataagca actataatct 300

ctaattgtca ttgcgaacag gtttattcat aataggctga atcggaatg ataaactaat 360
catatttaca aaaa 374

<210> 1170
<211> 441
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-H3

<400> 1170

cgctgcagg tagcgggtcaa gaattcacgg gccgacgggg ctgctaaacc ggattctcac 60
tactgcgcc cctacttggc gcaccaaaga tgtcgggtga aacgacgt atgggatcac 120
aagaatccct actacggttg cggggcgagg ggtcatgaga agagcaggat caacagtcaa 180
cacaagcact cgggtcggtt acccagggtc aggccgagag gatgcgtaac accctagtc 240
tgctttggta tgtatatctg tggtcttggg gttcttgagc tagctacaat gagtgtaact 300
tgtccaaggg tctgaatcct tctcttggat gccttggggc tccttttgta gtcaagggga 360
tcgccacagt ggcacacatg aggtggcatt ggtgtacggt ggctaagctt atcggttggc 420
attacgggac aagacacatt t 441

<210> 1171
<211> 356
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-H4

<400> 1171

ggtcagggat tcacgggtcg acgggggtcca gacagcggtta cctgccgcta cacgaaactt 60
cgcggttagat ggggttcgtgc caaagccaca ctgaagacat ccatcacttt tgtacottag 120
catcatcacg taacttcgct actgtaacgt ctctgaaagc ccccggtgtc tcggacttgg 180
atctgtcttc agcttatgat ctcttgggtc agtgcaagat catcagtagt tactagaact 240
ggcagtgcgt gaatactgaa tattcactac atgttcggta ccatgcattg ccctttctca 300
ccctgaaagt tgggtgcaacc ttctctgggt catcctaagc ccatgatatg attcgc 356

<210> 1172
 <211> 347
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-H6

<400> 1172

gacgggggtcc ggatagcggt acctgccgct acacgaaact tcgcggtaga tgggttcgtg 60
 ccaaagccac actgaagaca gccatcagtt ttgtacctta gcatcatcat gtaacttcgc 120
 tactgtatcg tctctgagag cccccgtgcc ctcgagcgtg gatctgtcct cagtttatga 180
 tctccttggg cagttgcaag atcatcagtg tgtagtacat ctggcactgg gtgaactact 240
 gatcaatact aaacggttcg taacagtaca ttgtcctttc gacccagag agttggtgca 300
 aacttcggtg gtgcatcttg accccacgat actattcgct caatcag 347

<210> 1173
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-H9

<400> 1173

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 tacttcatag aagattttga acacaaaggt agtgtccggc tctgcaaat aagtttccag 120
 atattgccat atagagaata atatttacac agatctaate tgctgatgta ttccatagcg 180
 tgacatcaca ctacggccaa gtctttattc gaatcaccac ctacgcgct ttatcgaggc 240
 ggtttccttg gcacgtcatg ttaaagtaga tatcatgtca ccttattccg ggatttcat 300
 caatacgggt gtgggtaacc caaccgtacc tgttggtatg ttttctcgat caaaggcgag 360
 tcccaaacgg tcacggggag ggcccttggg attcaacctc ttataaagag accaaggg 418

<210> 1174
 <211> 422
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-A1

<400> 1174

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 tgcgtctgcg tgcagaggag ggacagcgac acgcgcattt cgcgcgatct gacccccatt 120
 caggaagagt gcctacaaag attacagaac cggattgagg tgccgtatga tagtcaagat 180
 agagaacatc aggaagcact caaagccctt tggcatgctt cttttcctgg gactgaactt 240
 ctaggactag tatcagatca atggaacgat atgggatggc aatggaaaga tccatccaca 300
 gatttcaagg gtggtggctt tatctctttg gagaatttac ttacatcgc gaagaactat 360
 ccaaaatcca tcgatgagct cctttgttag caaaattgtg acagagcatt atgggaatat 420
 cc 422

<210> 1175
 <211> 452
 <212> DNA
 <213> Triticum aestivum
 <223> - Clone ID: LIB103-027-Q1-E1-A12
 <400> 1175

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 agccgcttgg cgcgtctgaa gacgaagagc attccagtga cttcgagcca gaagaaaatg 120
 gtgatggtgc tgaggacgag gagattgagg atgacgatgc tgaggatggt gaggatcctg 180
 tcaaggcgca atcctcatca aagaggaaga ggtctggtgg ggaggatgaa gatgatgacg 240
 acggtgatga tgatggtgat gatgatgaga agcctccatc aaagcgatag tcaatttggt 300
 cgtgctgac tgtgatcttc tctgcttggg ccaagaagga aaataatcct catggagagg 360
 attgttggtg aatgctgtag ctttaggaca tctgtggtag gtgtagcagc tcaaacttga 420
 gtctacccat gttagttggt agtgcatact gc 452

<210> 1176
 <211> 437
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-027-Q1-E1-A2
 <400> 1176

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 aaactatttt tttctcatgc ttcacttata ttattttgag agtcctacaa aacagcatgg 180
 taattttctt taattatgat aggcaccaa gattagtaaa aaaaaatctt atgagtgtgt 240
 tgaatactat gagaagtttg atgcttgata attgttttga gatatgaaga tggatgatatt 300
 agaatcatgc tagttgagta gttctgaatt tgagaaatac ttgtgttaaa gtttgtgatt 360
 cncgtagcat gcacgtatgg tgaaccgtta tgtgatgaag tcggagcatg atttaattat 420
 tgattgtctt ccttctg 437

<210> 1177
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-027-Q1-E1-A4
 <400> 1177

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 attagagtca tgctagtggg tggttgtgga ttgtagagac acttgtgttg aggtttgcaa 180
 gtcccgtagc atgcacgtat ggtaacggtt gtgtgacaaa tttgaagcat ggggtgtttc 240
 tttgattgtc ttccttatga gtggcggtcg gggacgagcg atggtctttt cctaccaatc 300
 tatcccccta cgggcatgcg tagtattact ttgcttcgag ggataataaa cttttgcaat 360
 aagtatatga gttctttatg actaatgtga gtccatggat tatacacact tttatgtttt 420
 catcattc 428

<210> 1178
 <211> 429
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-027-Q1-E1-B1
 <400> 1178

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ctggggctgc ctgtggcggc gacggtgaac tgcgccgaca acacgggcgc caagaacctc 120
 tacatcatct ccgtaaggg catcaagggc cgctcaacc gcctcccgtc cgctgcgctc 180
 ggcgacatgg tcatggccac cgtcaagaag ggcaagcccc acctccggaa gaaggtcatg 240
 cccgccgtca tcatccgcc acaagagccc tggcgccgca aggacggcgt cttcatgtac 300
 ttcgaagaca atgctggagt gatcgtgaac cccaaggggtg agatgaaagg atctgccatc 360
 accggacctg tgggaaagga gtgtgctgac ctttggccca ggatcgccag caacgccaat 420
 gccatcggt 429

<210> 1179
 <211> 454
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-B11

<400> 1179

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 ctctttataa aggcggtaga aattgtgcgc ctccccactc gcctgttaaa atcgcttatt 120
 ccccaagagc catgattgat ggcgcggttg gggtacccat gcccgatttg atgagaatcc 180
 cgcgataagg ggacacgatc tctgcttcga caagacgtgt caaggaaacc gcctcgact 240
 acgtgcagta gctggttggtg agaaacgttt cgaataatga ccagaccgtg gcgtgatgtc 300
 atgtataaaa aagctgctag catattagat ttgtggaata ttttgcctc tacggtggta 360
 tgcggaattt gtttttgcag agccagacac gattcctgtg ttcaaaatct tctatgaagt 420
 attcggagaa ggaacctgcc ttgcaatccc gaag 454

<210> 1180
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-B2

<400> 1180

cgttccaaaa ttaccgggtc gacgggatta tcttcccttg catgttatag ttcacaaaga 60
 aactctagta gcttcgtgat agcgactgga gaacttttgt caatcactct cttatctgga 120

agattaactc ccacttgatt aaagtgattg aagtaccag acattctgag cacatgctca 180
ctggctgagc tattcttctc catcttgagg caaaggtctt gtcagaggtc tcaacctctc 240
aacacgggca tgagcctgaa ataccaattt catctcttcg aacatctcat atgttctatg 300
gcggtcaaaa cgcttttggg gccccgactc taagccgtaa agcatggcgc actaaactat 360
catgtagtca tcagaacgta tcttccagat ggtcacaaca tccacagaca acgccagagg 420
ggttggcaca ctgagc 436

<210> 1181
<211> 448
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-B3

<400> 1181

cgggtccgaaa ttcacgggtc gacgggaaag attgtatgta tgtggacgag agagttggag 60
acaaacctaa caagacagag agagagagag atagagagag aaagagagag gaagaagtta 120
ggtttgtgag aaatacggat acatgtaata tacatgagat gtgtgtgcat ctggattctg 180
tatacgtgga aggagaagag acaacatgtt tgatgagaga gctggaaaaa catggacgag 240
aggggaagga tctcgtgggt tgagcgattg aaaattttgt gcgggggaga gagggattgg 300
taattttgtg caagagagag aggggtggggg gaggagtcag tcagccgtcg tcacatcacc 360
ctgcttccaa atgaccccg c attctctagc acggtgtggt cgccgtcttc gatttgatca 420
atgccctctt taaagattga ggtgttgt 448

<210> 1182
<211> 452
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-B4

<400> 1182

gggtccgaaat taccgggtcg acgggaatac aaatcactca atcgagcaaa attggacgtg 60
tgacattatt aggttgatct acacgaacca ctcgtagggg aaaactgtat tgtggagtac 120
accataaggt cacagtggca caatctgaag tagatcatcc tgtatacata gaagtgcaat 180

agaaccgatt agatgccatt aagcgtgcat gcaacaacag ccaccagaaa gcagcaccga 240
ccttaactat atagtaatgt gcgcaatata gtatcagtc tcatgcgggc gaactgatca 300
taatttacat tgcaaatatt atagcatcat cactcggttag ccacatggct ttatttaggc 360
agaggcatta cgtcatatgt caagcggcat caggaccagg tatttgcccta taaggacatt 420
ttgggtgtaag gactaaaaaa actccgtgtc ac 452

<210> 1183
<211> 471
<212> DNA
<213> Triticum aestivum

<223> . Clone ID: LIB103-027-Q1-E1-B5

<400> 1183

gtaccagtcc agaattcccg ggctcgacggg gaagcccatg atgccgccag gtccaagaac 60
aaggctgcac aaacctcggc gactgtacat gttccatgcc actctcagga ggcgcaagat 120
caacagcgtc acggcgctag cagtgccata cgcattgatag cccaagacca agttgggtgga 180
tctcggggccg ctcaagacca gcatgcacgc cagcattctg gcacgagcgg ggcacggctcg 240
cctggacaag atactgctcc ttctaacata gttagaagtt cgagcacgtc ccgctcctcg 300
cgccgtccgc cactgccacc cgccactcca gcagaagctt tggcgcgagc tcaacttctc 360
ctagattacc ctccaacgcc ggagaagatc gacgaatgga gagccaccat tcagagtctc 420
atcgggtacg ccaacggcga cactccacgg tgaacgaatt cgtccccgcc g 471

<210> 1184
<211> 452
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-B8

<400> 1184

ttccccgggtc cacgggggaga aggggaattgg agatggaacg gtcagctatg gaatggatga 60
tgctgatgac atatacatgc ggtcatggac tggcaccatt attggccctc acaatactgt 120
ccatgagggt cgcattctacc agctgaagct gttctgtgac aaggactacc ctgagaaggc 180
accatctgtt agattccatt caagaatcaa catggcttgt gttaatcacg agactggggc 240

ggttgaccca aagaagttca gtttgctagc aaactggcag cgggagtaca ctatggaaca 300
 tgtcttgacc cagctgaaga aagatatggc ggcgacgcat aaccgcaagc tagtgagacc 360
 tccagaaggg acattcttct agcgggggtg ttgctggccc atctccagtt ccagcagcag 420
 ctatctatgt cactcccatg ggatttgaaa tg 452

<210> 1185
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-027-Q1-E1-C1
 <400> 1185

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 tggagtaacg cattaagcaa gatgacatga tgtagaggaa ttaactcgag caatatgatg 120
 aaaaccccat cattttatcc tcgatggcaa caatacaata cgtgccttgc tgcccctact 180
 gtcattggga aaggacacca caagattgaa cccaaagcta agcacttctc ccattgcaag 240
 aaaaacaaat ctagttggcc aaaccaaacc gatagttcaa aaagaattac aaagatatca 300
 aatcatgcat aaaagaattc aaagaatgta acagcctcgt ttttggccct tttctttttc 360
 tttttgattt attggttttt gctctgtttt tcttttctga gcggttctat ggccttgcta 420
 cctgggaaat catcc 435

<210> 1186
 <211> 463
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-027-Q1-E1-C12
 <400> 1186

gtaccggacc gagaattcgc gggtcgacgg gtccttgctg agctgcttag tggaccgttg 60
 gaggccagag acccacacgt ttcacttctg atgggggaga gatggctcct actctggagg 120
 atgtgtcact tttgctcgga ctaccgttgg caggatcatgc cataggaccg ttggacgcac 180
 cggttggttg ggagcgagcc cttacacaac gttttcatgg tgtttttttc ggatgctccg 240
 gatctggtat gggagcatca cggacctaag tatgagtggg tgctcaattt ccgggtaatt 300

tccccaactt cttatcttca agttatcgtg catatggttt tacagaaaat aattgcggct 360
aactaaaact ttctctttgc ttaatgcaga tccaaaactt cggggcgccg ttgactgcgg 420
aacagatcac tcggagccta gaggcctact tgatgtgggtt ttt 463

<210> 1187
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-C2

<400> 1187

ggtccgaaat taccgggtcg acgggcacgc ctacgtccag gtcgacgtct tctacgacga 60
cgacceaacg gccaacctca ccgacgacca gtacgaagtc atccaccacg acagtgcga 120
agaagcttga tctacttagc tgagcaagat ctatctacct atctatcgag ctaatgtgcg 180
ccatggatta gagtgtgatt ctttcgagtg atctactgcg tcctaaattt atgtttgcaa 240
gtgatgatct tgtagcgtag ctatatgtag tgtgtcctct ggcttttgca acctggcaag 300
ctactatcta actaacgtgt tactgaaaat ccccgttatg ttgtccttcc aatcaccgat 360
taaatacgtc ggtaatgcac agtttttctt ttctgaa 397

<210> 1188
<211> 470
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-C3

<400> 1188

cgcttgcccc tgccgggtccg aaattcacgg gtcgacgggg gcggccaagg agggcgggcaa 60
ggcgaagaag aaggccaaga agagcgtgga gacgtacaag atctacatct tcaaggtgct 120
gaagcaggtg cccccgaca tcggcatctc ctccaaggcc atgtccatca tgaactcctt 180
catcaacgac atcttcgaga agctcgccgg cgatgccgct aagctggcga ggtacaacaa 240
gaagcccacc atcacgtccc gggagatcca gacctcgtc cgctcgtcc tccccggcga 300
gctcgccaag cagccgtct cagagggcac caatgctgtc accaagttca gtcctcctg 360
agtctcgtag ttagctgttt ggggtgtgtt gtggccgtgt tatcgtgtaa gaatcgcac 420

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gctatgtttc tggatctcga gaaatagtaa cggtagccctc ctcaatgttc

470

<210> 1189

<211> 446

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-C6

<400> 1189

taccgagtcc aaaattcccg ggtccacggg gctgctggag gggtaggtagc ggaccgggag 60
aaatccctgg ctggattccc ggccacgacg acggcgacac ctcttggtgt cgtcttcttc 120
cttgaggcgc ccgtcgaggt gcgtttaccc ccttccctcc cactctcatg cccgggtgaa 180
aactctagtc tcttcaggct gggcggcagc ggcgtttcat gcgtcgcat cttcttgaag 240
gtgccgcctt gggtagattg ggggtgtgca ggggcgatgg gtgtggtgtc aagtgtgtgg 300
cggttttgca ggaggagttg gcgccatggt cttcttgttg gggcaatgct ctgctatttg 360
gttgttcgtt gcctgtcttg tggtgttttg ttcgtgggt ctcagtcca tggcatggac 420
aggggaaga tagggttctt tccccg 446

<210> 1190

<211> 447

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-C7

<400> 1190

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tatcactaga tgagaagggt gggggggggg atcgaccaca atgattactg gataatttca 120
gggaggccct ggagtcatgc gagctcagt acattggcta ttacggtgat aagtttacct 180
ggagaaacca tagtaaggag ctcagtacat acatatgtga acgcctcgat agagccacgg 240
tgaatgcacc ctgttgatg tggtttccta acttcagtgt cctcaacggg gctcctcgtc 300
actcggacca caggcccgtt attgtatgca cttagggatg aaatagaacg gagcgatgtg 360
gggatcacgg gttctgtttt gaggcgtggt ggctacagga cgaaggaggt agtgaagatg 420
tgcaatgggc acagggggaa tgatgct 447

<210> 1191
 <211> 140
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-C9

<400> 1191

tacaactcac taaagtgagt cgtattaacg ggaactttac attccgattt ccgtcataca 60
 ccggcactgt ccactttcca cgcaacatct tcgtgttact ttactttctc tatcgctct 120
 gggggccacgg cccttcctgg 140

<210> 1192
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-D1

<400> 1192

acgctggccg tgccggtccg gaattaccgg gtcgacgaac ccaaattcct ccttcagatt 60
 gcaggatcca cgtggcattc aaggtctcga aggtagatta tgcgtccgca ccagtttgc 120
 gggatcgacg cgcgcgcgac cggtttccgc catgatagcc accatgagtg cctcctccgc 180
 gtgggtggag acgacaatga cacgctagtt cctcctcgcc ggcgtgctgg agcacgtgct 240
 cgtccttctc ttcatacgtc gcgtgcatag acgcggtccc accagctgct cccgtgcttg 300
 gcagcgcggc ggctgtcga ggagggactg aagacgacgt gagcgggcga tccttcggct 360
 tcatggcaca gggatggcgg cgacacgctg gtgatgggcg agaaattgtt ggccagagca 420
 ggcgggcgcc gccatg 436

<210> 1193
 <211> 454
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-D11

<400> 1193

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gacacgaacc atctcgctga ggcggctcgac ttcgaggaca agatgaatga gctggtggcc 120
ctgtgcagcc ccatcatcgc catcatgtac caggggtgctg gcgccgacat ggacggctgc 180
atggatgacg acacgccggg tgcattctgc ggcgctggcc tcatgattga cgacgtcgac 240
taagctagtc tatgttctgt ggcagagacc tgctgcttag ttattattat gtcgtgccct 300
atcgttatct gagactgggt tgtgggtgggt attgttttgg tccgagtggg caggggttatt 360
ccgtggagta aacattcgtg gaacatcagt ggattatggg tcacgtcacg tctaagtaat 420
atattaatct aaatcatcca gtggattatg ctgc 454

<210> 1194
<211> 451
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-027-Q1-E1-D2
<400> 1194

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aatctatagt agtaagggtgc ccgtgcgttg caccgaagag tgaaatgcat tgatcgggga 120
gttgtttatt ttgacaaagg atgtgggggt catctcatgt gtaacgggta tcgatagggt 180
tcttgggata ttatctcatc tctagagctc acaaacatcc ggggtgaaata gataaaaagg 240
tatcttttgc aaacaaaacc gttcaactgt tcaacctgca tccaaaactt gtgaagaaat 300
aacacttatt gtgctttgca agaaatgac ttttaagaatt agtttttgag tatcgattgt 360
tatacatgtt ggctacagat gacatggcac tttcttatag tcaacaattg gctatactat 420
taagtaatat taaccaatgc cttatacacc t 451

<210> 1195
<211> 447
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-027-Q1-E1-D3
<400> 1195

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catggcatcc gaggggtcca gcggcgctcg cgctggcggc cggaaccat cggtgtcaca 120

catacctaga catcgcgagg tgggtgaaatt cctcaccggc ttgccagcgc gaggaaacct 180
ctcgtcatgt tccaactctt ccaatctggg aagcctcatg gtttaagtca gcgagcacga 240
catacatcct ccagagggat cagtgatega catggatagc acaaagatcg taatcataca 300
tctgcaacta aataacacag acagtgaggc caaagacaca cgttctatga ctccacagga 360
aactcgcgag ggtataagat gtaccgcaga attttgggtg tgcataaatc atcccaaaag 420
cccaacttgg gcagtttctt cggattg 447

<210> 1196
<211> 478
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-027-Q1-E1-D5

<400> 1196
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cgcgacctga atgaatgaaa taaacgaaat aacgctcttg tgcaaaaaaa aaaaaaaaaa 120
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaagggggg 240
ccccaaaaaa atttaaaaat aaaataacct ttaaaaaaa ttaaaaaccc ttaaaaaggg 300
gccccaaaat taaaataaag ggccgttttt taaaaaaatt taaaagggaa aaacctggg 360
ttaaacaat taaaaccct taaaaaaaaa ccccttttcc aaaagggggg aaaagacaaa 420
aaagccaaa aaaaatgcct ttcaaaaaaa ttgccaaacc aaaaggggaa aaggaaac 478

<210> 1197
<211> 475
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-027-Q1-E1-D6

<400> 1197
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acatcctgaa gtgcttcagg ggagacgacg aagaacaaga agaccactac ccctactacc 120
gtccaggctc caggccccac tccccccagc agcagcagca agctgatggc catggcgctc 180

cctccctggc gcacgacctc ctcaactttg agagcgcgtc catgggttcct gaaggggtca 240
 ggcagcatgt tacggcgctcc aagaaagcac agattaaatg gtaccagaat atgttggagg 300
 catataagaa tgcgagaacc ccaccgagaa caccggaaga ggctgcacaa ctagttgtat 360
 cagccctaaa ctggatccag agtgctgatt tggagggtat cctcgaattc tacaacttcc 420
 ccatcccatc actacctgca gcatcctcaa accaccgtcc atcctcgctg ccaga 475

<210> 1198
 <211> 456
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-E11

<400> 1198

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 aaattatcta gctgaggtaa cacatgttga tacgtctcca acagatctat aattttttat 180
 ttttccatgc tattatatta tctatttttg atgttttata tgcattaata tgccatttta 240
 tatgattttt gggactaacc tattaaccta gagcccagtg ccagtttctg tttttccttg 300
 ttttagagtt tcacacaaaa ggaataccaa acggagtcca aacggaatga aactttcgcg 360
 atgatttttc ttggactaga agacatccag aggtcttttag tacatgtcag aaaagccacg 420
 aagcggccac aaggttcgga ggcgtaccca atgggg 456

<210> 1199
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-E2

<400> 1199

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 cacttcaggt gcacgatcct tccgcaggag gagaagatcc cggaatcat ctcccgttc 120
 acggtgttcc atgagaggtt catggcaa ataccgtgaca aaacgggtgt aacatgtgtg 180
 ggattacatg caagcctcat ggattttccc aaggcgtttt tgcccgcgtt gacaacaata 240

ccgtgtagat gagacaaaat aacgcaacta catggcgtgt gtgtgtgaga ctatctcata 300
 ttaccactca gacgcctttg atggcaattt ggcaactgag aatttttatt tgagaaaaag 360
 aaacaagaga aaaaaaaagg cggccgccca agaggatcca agct 404

<210> 1200
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-027-Q1-E1-E8
 <400> 1200

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 caagctgcag cttgtcatga agagcggcaa gtacacgctc ggctacaaga ccgtcctcag 120
 gaccctcagg aactccaagg caaagcttgt gatccttgct aacaactgcc ctccgctccg 180
 caagtctgag attgagtact atgctatgtt ggcgaagatc actgtccacc actaccatgg 240
 aaacaatgtt gatttgggaa ctgctgtgtg taaatacttc cgagtctgct gcctgagtat 300
 catcgaccct ggcgattccg acatcatcaa cgcaacacca gctggccagt aaacctgtgt 360
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 gctggacttg atttggctct gtgtacatc 449

<210> 1201
 <211> 477
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-027-Q1-E1-F1
 <400> 1201

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 accgttagcc atggtagtag aagtaatagt tggcgagata acttcatgga gacacgatga 180
 tggagatcat gatgatggag atcatggtgt catgccggtg aagatgatga tcatggagcc 240
 ccgaagatgg agatcaaaag gagcaaatg atattggcca tatcatgtca ctttttgatt 300
 gcatgtgatg tttatcatgt ttatgcatct tatttgctta gaacgacggt agtaaataag 360

atgatccctc ataataattt caagaaagtg ttccccctaa ctgtgcacca ttgcaaaagt 420
tcgttgtttc gaagcaccac gtgatgatcg ggtgtgatag attctaacat tcacata 477

<210> 1202
<211> 463
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-F6

<400> 1202

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gcaaggcggg cctatgacac tgatttgata gttgatggct accaagacta cattaccgaa 180
gctgtgtggg tcaaggaaca gtatgacttc aagctgggta atctgatgga gcactacgga 240
ataaatagcg aggctgagat aataagtgga tgcattctta agatggcaaa taattttacc 300
aagaagaacg acgccgatgc tatcaggctg gcgggtgaaat ctttgcgga ggaagcaagg 360
tcatggttca gcgagatggg ttcagatgag ggcggagggtg gtcacgaagc ctcggaacgcc 420
aaggcatccg cttggtatca tgttacctat caccctgagt act 463

<210> 1203
<211> 457
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-F7

<400> 1203

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atcacagggg accaaatgga tatctctacc tcccctcgcc ggaccgcacg tataaaatcg 120
ccctttctac acaaccgcaa ttccttgctt cctcaatctc gactcatctc tccattgtag 180
tggtaatctt ttgcgatcag ttcgagctcg atcaaagcga gaagccaccc acacacatac 240
ttagccgtag cagtgggtatt acttgctgcc gatcaatcag cagactcagg gcatatcggg 300
tgctactaca tacattcata atgtcgtcgt cctcctctc gtcggctgtc ttcaacctgt 360
accagctcac gccgtctccc atcgagcagc tctgctacgt ccactgcaac tgctgcgaca 420

ccatcattgc ggtcgggtg cctgcaaca acctgtt

457

<210> 1204

<211> 468

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-027-Q1-E1-F9

<400> 1204

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gcagcgatat cagcgtgaca gtccctgggc gcacaatcga catattgcag aggaggtgtg 180

atgagcagtt tgccatccac catgcaaaag atccagagct gtcggcgggc atgatcgacg 240

gccacccga agagccgctg tcaccaatgc tcatcgagag cctgatgccc cgcaaggaat 300

gggcagagga tctctacgat tcagtcaaga cacgggcagc ctgcggttc atcattgcct 360

gcggcggcca tgtcaacctt gatcccaatg atatggtggc caggatcgag cgcatecttg 420

gcgaggttga cgtccccgac anagtagaac atcaccaacg tgatatct 468

<210> 1205

<211> 453

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-G1

<400> 1205

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taccgcgacg acccgcgata cctccgcgtc tggatccaga tgggtggacta tgtgaaggac 120

gcaaagccat tgctgaagaa gttggagagg aacagaatag gcctcaagag agctgcgttt 180

tatatggctt atgcgatata ttatgagaag cgtaggaggt ttcaggaggc agagcagatg 240

taccgcgtgg gaatccagaa ccttgcagag cctatcgagg agttacacaa atcacatgat 300

caatttatct atcgcatgga gttataccgg aagaggaaag ataaagaagg aatgcccagc 360

agagttaaac cacttcctag atgtgcaaac caagttgatg gtcaaagcag aaattataca 420

gaacttaagt ccaatcctgt gcaaaaattg gga

453

<210> 1206

<211> 441

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-G8

<400> 1206

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attattttcc tattaattta atattccttc cgtcttttat tttgcaatct ttactttcca 120

atctatatca taaaaatacc aaaaatatct atcttattat ctctatcaga tctcactttt 180

ggaagtggcc gtgaagggat tgacaacccc tttatcgctg tggttgcaag gttcttattt 240

gtttgtgtag gtacgaggtg acttgctgct aacctcctac tagattgata ccttggttct 300

caaaactgag ggaaatactt acgctacttt gctgcatcac cctttcctct tcaagggaaa 360

accaacgcat actcaagagg tagcaagaaa gatttctggc gccgttgccg gggaagctta 420

agttaagtca agacattaca a 441

<210> 1207

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-G9

<400> 1207

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cccaagatcg cagatccgct ccggtgagaa tccgtcgcca tgtcttcag cgaggcgcc 120

tgcacccttg ccgccctcat cctccacgat gacgggatcc ccatcacttc tgagaagatc 180

gcgacggtgg tgaaggctgc cggaatcaag gttgaggcct actggcccgc gctcttcgcc 240

aagctcctgg agaagaggag cgtcgatgac ctcatccttt ccgtcggatc tgggtggagg 300

ggtgctccag ctgctgctgc tgctgccccg gctgctggtg gtgctgctgc cgctgaagag 360

aagaaagaag agaaaaagga ggaggccaag gaagagagcg atgatgacat ggacttcagc 420

ttgtttgact aagca 435

<210> 1208
 <211> 151
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-027-Q1-E1-H1

 <400> 1208

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 ggaaacaagt tccggatgtc cctgggtctg ccggtggcaa ccaactgtcaa ctgcgctgac 120
 aacactgggtg ceaagaacct gtacatcatc t 151

<210> 1209
 <211> 463
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-027-Q1-E1-H3

 <400> 1209

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 cctgcttcag gtgccaccac tgcaagggca ccttcaagct cgccaattac aactccttcg 120
 aaggagtgtc ctactgcagg cctcactttg accagctctt caagaggacc ggcagcctgg 180
 acaagagctt cgaaagcact ccaaagggtt tcaagccaga aaggaatgtt gggaatgaga 240
 atgctactaa agtctcgagc gcatttgctg gcaccagaga gaaatgtttt ggatgcacca 300
 agacggtcta tccaattgag agggttactg tgaacaacac catgtaccac aagagctgct 360
 tcaaagtctg ccatggaggg tgcaccatca gcccttcgaa ttacatcgcg cagcagggaa 420
 agtcctcttg caagcancaa cacaccagc tgatcaaaga gaa 463

<210> 1210
 <211> 363
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-027-Q1-E1-H4

 <400> 1210

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caagcagagg gtcacggcta agggccgttt gggtgccact gctgctgtgt actctgcagc 120
aacccttgat taccttactg ccgaggtcat tgagctggcc ggcaacgcta ccaaggatct 180
caaggtgaag cgtatcaacc ctgccacct gcagcttgcg atccgtggag atgaagagct 240
ggacaccctc atcaagggca ccatcgctgg tgggtggtgc atccctcaca tccacaaatc 300
actcatcaac atgacctcca tagagtgaat gacatgcaat aacaggtaat tgttgtgtgt 360
tgt 363

<210> 1211
<211> 452
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-027-Q1-E1-H6
<400> 1211

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caccacattc tttgggcgtc ccaaaaaacc acaattttct ttgctaattt tctcaataaa 120
cacttatgac caatttaggc agaattaatc taatctctga catgtcaaca cgttgggtcag 180
atccacgtga cactgcaaata caacttgtgg ttgagttggt taggtgaata gtggtatccc 240
caaccaccca gggttcaaata cctgggtgctt gcattattcc tgggtttatt tcagaatttc 300
caagatgata tgccgggtca gtctctcgga ggtgctcata gggatatggt gttcgtgtgt 360
gcgttcatag gggtgagtgt atgcgcgtgt atatgagcgc ttgtgtctgt actgatgctc 420
aaaaaaaaa gatccatgtg acactaatc ac 452

<210> 1212
<211> 450
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-027-Q1-E1-H7
<400> 1212

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gtgaaactgc atgtaagttt ggtatgcatt catcttgtgt accatttacc gtacaagatt 120
tcatgtggtt cgtgtatggt cttttgggtat tcatttaata attgtgaaaa taaattgcaa 180

taaagaggta agaaatgttt tttagggaaa gaggtaagaa atgttatttg tacatgttgt 240
tagttatgga gcaatatgtt tgatgaaaca cgттаатсса catacccta gtcagatttc 300
aatctccact cattaccttt ggtaaactctg tattgatgga gtgaccatga tttcatctaa 360
acatttccag gaaaagatta acgactttct tcacaaaaat gatggatgat tgcaagtttt 420
tcacatgaga agaggaaaga acagagaggt 450

<210> 1213
<211> 392
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-H8

<400> 1213

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atTTTTgcaa atatgaacta tgtgcccgta aatttcaatg ttcttgatat agattgcaat 120
ccttcatgtc ctattattct tagtagacct ttccttagaa cgattgggtgc aattattgat 180
atgaaggaag ggaatattag attccaattt ccgttaagga cagacatgga aaacttccct 240
agaaaaaaat taaattacct tataaatcta ctatgagtgc cacttatgga ttacctacca 300
aagatggcaa tacctagatc catcttcgct tttatgcta gctaagggcg ttaaacgata 360
gcgctttttg ggaagcaacc caattttaat tt 392

<210> 1214
<211> 421
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-A10

<400> 1214

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agtctcttgt tgagagattt gaaaagagag agagctctag cattgattgt tcatcgccaa 120
ctggctcttg tggatcat acagtgaaag ctgatagccc tcccaccagt tcggcagaag 180
caagtgcac atatgaaagg gacttgccaa cagtggacga gatgacgact ccaatcgatt 240
tggatgggaa ccatgatgaa tttataaatg ttgtaaaatc tcggttgaca aagctagaga 300

tgatgcggca tgtctttaac ctaaattggca tcaaaggagc aattgctgcg gtcgcaaagt 360
 tgcctgatat cgctgttcaa gctgatgtgg ttagtactct caagggaaaa cttggctctt 420
 t 421

<210> 1215
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-A12
 <400> 1215

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 ccatgttggt attctttcaa gtttagattc tggcaagaga agagtaattg atgcatccag 180
 tgatatgctg tattaccttt caagctgcaa tgaggatggc tctgatccag aatgtgagaa 240
 actagggtgg aagaaacttg aggaatatga tccatctcaa cgactgtgga aatgtcttgc 300
 tagtctaatt gaggggtgtg ttctttcaga agatatggct gatgatcctg aagagatgac 360
 cgcaagtgat tactacgca ccttgccact tgcagctcta ttc 403

<210> 1216
 <211> 383
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-A4
 <400> 1216

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 tcctcatggt gctcaaccac gtgcatctcg acatcgcat ctctccaag gccatgtcca 180
 tcatgaacgc cttcatcagc gacatcgctg ataagctcgc cagcgagtct gccaaagctcg 240
 cctgctatca cgagatgcc accaacacct cacgggggat gcagagcacc gtcggccaca 300
 tcatcgctcg cgagctcgc gcgcacaccg tctgagaagg cagcacagcc gtcaccaagt 360
 tcaacggcgc ttagaaaatc tgt 383

<210> 1217
 <211> 381
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-A6

<400> 1217

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 acacceaacg ataaggtttg gctcatgcat ttaccggagg actcgatttc gtcacgcgaa 180
 gacctgtgcc acgaattcat cgggtgccatc accggtgggc accacgaact cggcaagccc 240
 atcgacctac aactttctcca gcataaagaa ggacaaaccc tccgtaaata cttacaacga 300
 ttttaatacac ttcaaacgaa tattccaaat atctatccag cagctgttat aacagccttc 360
 taatctaata tgcgcacatg t 381

<210> 1218
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-A8

<400> 1218

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 ttcgagcact gcgagaagga gcctaatagcc gtctaccacg gaccctcttc agctctggca 180
 ccaccgtcgc catcaagcgc ttcgaccgct ccgcctggcc tgacgcacgc cagtctgtgg 240
 aggaggctag ggcagttggg ctgttgacga gcggtcgctt gtccaacctc atgggatgat 300
 gctacgaggg tggcgagcgg ctgctcgttg ctgagtcacat gacgcatgat accttggcag 360
 ctgtgattcg tagtgtggtt agggtttggtt aagtttacta gctccttcac tgatgatggg 420
 tggcccgtgg tgcttt 436

<210> 1219
 <211> 397

<212> DNA
 <213> *Triticum aestivum*
 <223> Clone ID: LIB103-028-Q1-E1-A9
 <400> 1219
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 tcaacccttg cgtcaggggtg acggatgatg tcagggaaaa ggtgatcgct ctcatagaag 180
 ccatggaatc acacagggag ctcgagcttc tcaagagaaa acgtgttgct gaactgtcgg 240
 tgcttccgaa aagaacacgg gaacttccat ctgagccttc ctccccaggg ttgcctactt 300
 cgctgctat taatcctgca ttcgatccga gtcagctcct tggcctggaa gtgcctgctc 360
 cggctacttag actatctggt gctgccacca agccccg 397

<210> 1220
 <211> 424
 <212> DNA
 <213> *Triticum aestivum*
 <223> unsure at all n locations
 <223> Clone ID: LIB103-028-Q1-E1-B1
 <400> 1220

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 ttttgacaga ttctgttttt cgtgtgttgt tttcttattt tgatgaatct atggctagta 120
 aaatagtttt taaaccatag agaagttgga atacagtagt tataacacca atataaataa 180
 ataatgagtt cattacagta ccttgaagtg gtcttttggt ttctttcgct aacggagctc 240
 acgagatttt ctactttaag ttttgtgttg tgaagttttc aagttttggg taaagatttg 300
 atggattatg gaacaaggag tggcaagaga ctaagcttgg gattcccatg gcacccccaa 360
 gataatataa gtacacctaa aagccgaaac ttggggatgc ccangaaggc atccccctct 420
 tcgt 424

<210> 1221
 <211> 399
 <212> DNA
 <213> *Triticum aestivum*

<223> Clone ID: LIB103-028-Q1-E1-B11

<400> 1221

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gttcgccaga attgtcctta ggaatctgga acaccatcag gcacggactt caccctgaaa 180
acacaatggc gagcacaagc gcgactaatt ctccaacatg gtatgacttc taacctttgg 240
ccccagaatg gatgcaaact cgcggttaag ttgtcgccgg catttgaagc tgccgcgcaa 300
gctgtgacct tggcacttcc accttgagga gaactgtcag aagagatgaa tgaacgttca 360
accggcagct gttgagtgtg caattttcct gttgtttgt 399

<210> 1222

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-B12

<400> 1222

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tcacttatat cttttagagc acggcgggtgg ctttattttg tagaaattgt tgatctctca 120
tgcttcactt atattatttt gagagtcttt tagaacagta tggatatttc tatggttata 180
aaattgggtcc taatgatggg catccaagtt ggggtataata gaaactatca taggaagtga 240
attggatgct atgatcaatt tgatacttga taattgtttt gagatataga ggtggtgata 300
ttagagtcac gctaattggg taattgtgaa tttaaagaat acttgtgttg aagttggcaa 360
gtcccgtagc atgcacgtat ggtaaaagtt gtgtaacaaa tttgttgcac gggatgctcc 420

<210> 1223

<211> 408

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-028-Q1-E1-B2

<400> 1223

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aaccaagggtt ttgtcatggt ctctactaa gcagaccgct cgtaagtcca ctggaggaaa 180
ggctccaagg aagcagctag ccaccaaggc tgcccgttaag tctgctccca ctactggagg 240
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<210> 1224
<211> 414
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-028-Q1-E1-B4
<400> 1224

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acgcgcaaat cgggcgctcc gaggaggcgt tgcatgcctt tcaactcgatg ttggaggaca 180
gggtcaagcc ggacgagttc accatggcca gctgctgtc tgccctgcgcg cagctcgggt 240
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acttcgttct gaatggcctg gttgatatgt acgccaagtg cggcgacctc gagcacgccc 360
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<210> 1225
<211> 423
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-028-Q1-E1-B6
<400> 1225

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gcaaggcttg agctgaaccg aaatgatgga actaccatgg aaaccctctg gccatctgat 180
gtgtgtgtat aagtagtgct gacactgcag cctgtttcct gaggaaattt gttgcgtcgt 240

tgaaattgag ttgtagttgt actacttta gctgtagctg tagccctaaa ttatcttgtg 300
 tcgaactgaa gatgtaccac agtaagttca ttcatgattg caacatttgg gcgttctgca 360
 gctgagcaga gttaatgcct agaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagcggccgc 420
 tct 423

<210> 1226
 <211> 432
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-B7

<400> 1226

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 tatacgcaact ctcacccttc catcattgct agcctcttcg atgccgtgca ttggcctttc 180
 ccaccttgag agtcggtgca aacttcgccg gtgcatccaa agtcgtgat atgatatgct 240
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 gcatttccat agccattccg agatatattg ccatgcaact ttccaccgtt tcatttatga 360
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 aaagccacca tg 432

<210> 1227
 <211> 437
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-B8

<400> 1227

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 tatacgcaact ctcacccttc catcattgct agcctcttcg atgccgtgca ttggcctttc 180
 ccaccttgag agtcggtgca aacttcgccg gtgcatccaa acctcgtgat atgatatgct 240
 ctgtcacaca ttaacctcct tatactcttc tcaaacagc caccatacct acctattatg 300

gcatttccat agccattccg agatatattg ccatgcaact ttccaccgtt tcatttatga 360
cacgtttcat cgttgtcata ttgctttgca tgatcatgta gttgacatca tatttgtggc 420
aaagccacca tgcataa 437

<210> 1228
<211> 411
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-028-Q1-E1-C1
<400> 1228

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tgatgaacgc ctactgcgac cgtcagtcgtg tggatctcaa ctccattgct ttcctttttg 180
atggtcgtag gctccgtggt gagcagaccc ctgatgagct tgagatggag gaaggcgacg 240
agattgacgc catgcttcac cagaccggag ggggctttcc tcgcccttag aaggagcttg 300
ctgcagcctg gctgttctat gtcgtatgct acctttagaa ctagagtaaa atgtaagaag 360
tgaaagaact tgcgaggcta tgattctgtg ccatagcctg anggggggtc t 411

<210> 1229
<211> 426
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-028-Q1-E1-C10
<400> 1229

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aagcctggca tgtaaactct attgcagttg ctctggtctt taaagaaaat tgttgtgctt 120
tttgtatgat tgatactttg caataacatg gttgcatgca tcaatcgatg caaaggcccc 180
agggctccct cttttattga aaaagggttac catatacaag agcatgtcat aatataatga 240
gacaacacaa taaagcaacc ggagaatgta cccaatgaaa atgatttgta atggacaaca 300
aaaatgagaa aagaaaattg aacttacaat gataatttta agggtaacat caaggccttg 360

tttctttaac ctaagaacca tttcatcctc caaagcacga acttgggtcca atatataaac 420
aatctg 426

<210> 1230
<211> 139
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-C11

<400> 1230

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ccggcgggcga cgggaagacg acggggccgga agaatggcag caaggccaag aagggcgtgg 120
agacgtacaa gatctacat 139

<210> 1231
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-C12

<400> 1231

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ggcgacaaga agggcaagaa gaaggccaag aagagcgtgg agacgtacaa gatctacatc 120
ttcaaggtgc tgaagcaggt tcaccccgac atcggcatct cctccaaggc catgtccatc 180
atgaactcct tcatcaacga catcttcgag aagctcgccg gcgaggccgc caagctggcg 240
cgggtacaaca agaagccac catcacgtcc cgggagatcc agacctccgt ccgcctcgtc 300
ctccccggcg agctcgcaa gcacgccgtc tccgagggca ccaaggccgt caccaagttc 360
acctctcgt aaagtgtcc tgctcctgtg tctcgtagtt agctgtccgg gtgtgtttgt 420
ggccgtg 427

<210> 1232
<211> 414
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-C2

<400> 1232

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gctcctaggg ggcggaactcg gccaatTTTT ctgcgcgggc gcgaaaaaat cggctgggga 120
ggcctttctg gggggcgggc tgaagatgct ctaaaattca aggacaacca aaagcctaag 180
cttgggggatg ccccggaagg catccccctct ttcgtcttca tccatcaata actttacttg 240
aggctatatt tttatttacc acatgatatg tgttttgctt ggagcatctt gtatgatttg 300
agtctttgct ttttagttta ccacaatcat ccttggtgta cacacttttt ggagagacac 360
acatgaatcg gaatttatta gaatactcta tgtgcttcac ttatatcctt tgag 414

<210> 1233

<211> 402

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-028-Q1-E1-C4

<400> 1233

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tctagtgcag ccgcttggcc gtgctgaaga tgaagagcat tccagtgact ttgagccgga 120
agaaaatggg gatgggtgctg aggatgagga gattgaggat gatgatgctg aggatgggta 180
ggattctgtc aagccgcaat cctcatcgaa gaggaagagg tctggtgggg aggatgaaga 240
tgatgatgac ggtgatgatg atgggtgatga tgatgagaag cctccatcaa agcgatagtc 300
aatttgttct tgctgatctg gtatcttttc tgcttgggcc aagaaggaaa ataatcctct 360
gggagaggat tgttggtaaa tgctgtagct ttaggacatc tg 402

<210> 1234

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-C5

<400> 1234

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cacatcgtgt cagcgtgct cggcagaca tctcgagatc tgctgtgcga aaacagacct 120

gatctgtgtg ctgtggtctc atagagacca tatatatcta cactaaatat atcacatgtc 180
 acatctcaca tcgagatggt gttacacctt tctcgtgaca gtctcgcgct ataacagata 240
 gcgctctctg ttcgccccgc cgccccgcga gatgctatag tggtagagtg tatatctcct 300
 cctcgcggt gtgcctctgc gtgtacatat atggatactc tctctgtaca gtgacaccgg 360
 ctaacattga gattataaca ctctgtgtaa tgttataata ctctgttgcc ctcc 414

<210> 1235
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-C7

<400> 1235

aattccccggg tcgacgggta catgatctca tctggtcagc ccgttaacga gtacattgat 60
 gctgcagtta ggcacgttct tctcagacag ggcgttcttg gtatcaagggt gaagattatg 120
 cttgactggg accccaaggg caagcttggc cctaccacc cgctgcctga ccttgtcacc 180
 atccaccccc cgaaggagga ggacgagctg cccccaccgg ctttggttga ggtctaaagt 240
 cccaatagag caagcagacc atgaaacggc acatcatttt ggtcctagct acttttctat 300
 ccctgtgata agcgagggct atgcaacgct tggttaccta ccttaccttt taatggacaa 360
 aagtttctgt gtaatgcttc tatgttaatt tcgtttaaac taagttttgc cgagacaagt 420
 tacttatgta tgccacaaac ctttgt 446

<210> 1236
 <211> 396
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-C8

<400> 1236

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 tacgtgtata ttttgaatgg tggggcagta agctggtgca gttgcaagca aagcgtcgtg 120
 acgggtactc gaccgagacg gtggtgaccg ccaccggcaa cgagggggag tacgagcgga 180
 tcaccaagga ggagaagcac cacaagcaca aggagcacct cggcgagatg ggcgccgccg 240

ccgccggagc cttcgccctc tacgagaagc acgaggcgaa gaaggacccg gagcacgcgc 300
acaagcacia gatcgaggag gaggtggccg ccgctgcagc cgtcggcgcc ggcggcttcg 360
tcttccacga gcaccacgag aagaagcagg accaca 396

<210> 1237
<211> 377
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-C9

<400> 1237

gtcgacatcg gcaggaacgt caaccatgga aacgactcag ttgagagtgc caggaatgag 60
atcgccctgt ggttccctga gggcattgca gagtggagga gcagccagca caactggatc 120
tatgaggcct aagatgtgtc atgagtgggt tgagtgcagg tttcattaag catctaccaa 180
actagtcttt ggttggtttac agttttgaga tttgtatctt gggaaccttg tttgtgtgaa 240
ctgaactgat ctccctgtgc ttgagcactc aagcgttata tgctgcteta tatttgatat 300
atggtattga gttgcattcc acaccataaa agccatcggt cgaaaacaaa gcgggcgctc 360
tataggatcc aagctta 377

<210> 1238
<211> 425
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-D12

<400> 1238

ggtccagaat taccgggtcg acgggcaatg gaggatgtag gtgtgatatg tcaagtagtg 60
gacagataag ccaaccactg gatgtggttt tcagggattt ttgcagtggg atttgtaggg 120
tactatgctg cgctgtgttt gggatttgaa ataaaacgat gggagatgtg ccacgctccc 180
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaagc ggccacccaa caggattaaa 300
ggttacatac ccatgcatgc gagttcataa cccttcaata gtgtcaccta atttcaattc 360
actggccctc gttttacaat ttcgtaacat gggaaaaccc gaaatgttac ccaattttta 420

aaccc

425

<210> 1239
<211> 450
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-028-Q1-E1-D2

<400> 1239

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tatgaaggaa gggaatatca gattccaatt tccattaaga aaaggcatgg agcacttccc 120
aaaaaataaa attaaattac cttatgaatc tatcatgcgg tctacttatg aattaagtgc 180
caaagatggc actacttaga tctatcctcg cttttatgcc tagctagggg cgtaaacga 240
tagcgctagt tgggaggcaa cccaatttta tttgtgttct ttgtttttgc ttctgtttat 300
taataaattt tgcactaca ttctgttttag atgtgttttt atgttttaat tagtgtttgt 360
gccaagtaaa acctatagga taacctatgg tgatagttaa tttgattctg ctgaaaaaac 420
agaaattttg cgcgcatgaa attagttttg 450

<210> 1240
<211> 393
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-D5

<400> 1240

cccggtcga cggggaggac aatgtccaga tcgcggagag ggctgtccct gaagccgtgt 60
ttggcgagct cggaagaga gccgcggaga gcaggaggga aagctccagt gctcaagaga 120
acaacgagca gcagctgggc gctctcgaga gaattaagcg aaggcgtcaa tagggtaaaa 180
gattgtgatc caagcacgcc attacctgtc gttgagccta atgatgttgt agctgttacg 240
tgtaaacatg ttctttgcta gcgtttgctc ttcttgtaca aggattttgc aggagttaat 300
ccggtgttga tccgcagcgt ttttctgtgt acaaactgta aactcttggg acacgtgtcc 360
atcattttca gtgaaatttt gtcgattcca agg 393

<210> 1241
 <211> 420
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-D6

 <400> 1241

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 cgggcaagac ggcgtccaag gaggcgggag gcgagggcaa gaccgggggc cgcaagaagg 120
 gcagcaaggc gaagaagggc gtggagacgt acaagatcta catcttcaag gtgctgaagc 180
 aggtgcaccc tgacatcggc atctcctcca aggccatgtc catcatgaac tccttcatca 240
 acgacatctt cgagaagctc gccggggagt ccgccaagct ggcccgctac aacaagaagc 300
 ccaccatcac ctccaggag atccagacct ccgtccgcct cgtcctcccc ggggagctcg 360
 ccaagcacgc cgtctccgaa ggcaccaagg ccgtcaccaa gttcacatcc tctaaactg 420

<210> 1242
 <211> 420
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-D8

 <400> 1242

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 gaggccccgga tgaagggtgg gttctatgtc agtctgagg caaagctgct gtttgtcgtc 120
 cgtatccgtg gtatcaatgc aatgcaccca aagaccaaga agatcttgca gcttttgctg 180
 ttgaggcaga tttttaatgg tgtgttcctt aaggtaaca aggccaccat taacatgctg 240
 cgtcggggtg agccatatgt tgccacggg taccctaacc tcaagagtgt caggagctg 300
 atctacaaga gaggttacgg aaagctcaac aagcaaagga tccctctggc caacaacaaa 360
 gtcacgagg agggtttggg gaagcacaac atcatctgca ttgaggacct tgtgcacgag 420

<210> 1243
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-E12

<400> 1243

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gtccatttgc tctagcttca cttttatgct tctgtcgatc ttccccactt catcgatgtc 120
tttctccatg cgtcccttga ttgctggaag atgcatcatt taaacgctcc gcgtatatct 180
taccacatta ccaactcagaa atgcaatcag tacatatata caagtaaagg atggagttca 240
agcctttcat tgcagaggcc ttagtggctg attttgactc ctcgttggct tcttgcaggt 300
ggaaagaaag aattaatttt ccttgtcaat agtacaagtt agagactaag gtgatggcaa 360
gatgtaacta aatattgttt taaaaagga aagagctcat gtctgaaacg tctgaaac 418

<210> 1244

<211> 441

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-E7

<400> 1244

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gtaatgacat ctcagatgga gaaacttgat ctaacagaga cataacatgc gcgaaatttg 120
gcaaggcaaa cctgttagtt ggcagacgag cacaacatca gtaagaatgt atgcaagaca 180
tatatggtat aattttgaga taaacaacaa ataataatac tcacatcggg acggttaaac 240
attctcggat gttgtatgag cgtcgggtcg agcgcttgtg ttaataataa gatcctttga 300
gtagtagagc atgaagaggg caacgatggg catgagctca ccaccgtcat ttaggtgctt 360
ggcatggaaa ttctcgttgc agcggtaagc cgcgtagcac aacatctcca cccacacatc 420
gcggatcata tgaagtgttg t 441

<210> 1245

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-E8

<400> 1245

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ccaggagatg ttccggaggg tgagcgagca gttcactgcc atgttcagga ggaaggcttt 120
cttgcatggtg tacactggtg aaggcatgga cgagatggag ttcaccgagg cggagagcaa 180
catgaacgac ctcgtctcgg agtaccagca gtaccaggat gccactgctg acgaggaggg 240
cgagtacgag gatgaggatc aggagcctga ggaggacatg taagggtggga tgtccatgtc 300
gtgctttgct ggggtgggggt tctgggggca gagtttgatc tgtttggtgc tttgttataa 360
atctgtttat catcgcaact accgcttgta cgccaccgcc attcttctg cctttcctaa 420
gctctgt 427

<210> 1246
<211> 400
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-F1

<400> 1246

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tcggggatac agcggggtat ataagtattt agaaaaataa atatgaaagt atatagaaaa 120
ataaatttga attaagatct aatgagaatt ttttagtact ggatatatat tgtctccttt 180
ctattcatga aagactgaga gcagtccact cacagcccat gtagctgtcc gtccacttag 240
agcccatgta gctgtccatc cacttagagc ccatgtaagg cccaattcca gaaaacccta 300
gactagtagc actccagctg ctccagccga cccaacctc ccattctcgt actccctttc 360
tccagccgcc agtgaagaaa ggaaacgaca gcgccgcaa 400

<210> 1247
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-F11

<400> 1247

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gtggactcgt gtgcgccacc tcaaaagagt cgcttgcaat cgtagtttag gatagccacc 120

gagtcaaagc tggcttgctg cagttaaacc ccaccatccc tttgttgata atgatgcata 180
 tgtagttagt tctgatgtaa gtcttgctgg gtacatttgt actcacgttt gcctatttta 240
 tgtttttgca gagagacttc agtctcatta gtagttccgc ttggacttcg acgttttagct 300
 tgttacctca gctacgatct tgtgccccga caggatctgg tagatagtca gactttctcag 360
 cctttttcat ttctagatgt ctgtactcag acatgatage ttccgcttgt gcctttgact 420
 tgta 424

<210> 1248
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-F12

<400> 1248

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 ccggtttaaa tccctttaat atattgaggc tatgttcggc caacttgcgt gggatccctg 180
 gcatatctga cgggtgccag gcaaatatgt ccaagttttc gcagaggaat actcatagt 240
 cggcgtcaac tgttgggttc agctacgctc cgatagatgt tgtcttcttg gggtcgctt 300
 ggtggacctg gaatttgact atttcttctg ctggtttgaa ggaggtggat ttggggcgct 360
 tategaggat tatgtcgtcc ctgtccacca tggagcacag tgcag 405

<210> 1249
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-F2

<400> 1249

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 ctgctaggac ccacgggaag ggccaccgta ttgcgcgaaa aaaaacattc ccccgctgtc 120
 agctcggacc caccagaagt gcttccttat tacgcacaaa aaaatgaata ctccccctgc 180
 tggttgggac ccaccttggg gggaggatga cttgtgggcc tactaagttg aaggggatgg 240

agtgctttgt caacttagtc aatatgaacg attctagctc cagtgaccgt acgatgtcca 300
 tccaatggct gcagtgttc ttcaacctct ggtcttggtg ctccagccgc ccaaagcagt 360
 gccggtcgtg ccgcatgctc ctgcctccca tggccgggtg tgctgccgcg gaagcctcaa 420
 cgccccgtac tattcccaac aat 443

<210> 1250
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-F5
 <400> 1250

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 agagcaaacc ttatccagag ctggatgagt cagctttggt tgtagcccaa gccaaagtgt 120
 cgcgtgtgtt tgaaatctca ccgttgggca cgtatcagtt ccttagtgac ccaaggcat 180
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 agcatttgag agagagagag atcattgcga ggactaatgt cacatcccta gttctggtat 360
 gctcaaggct agctagtcac gtgtgcatca tgtttcaatt ccatttaaatt ttgaaatgag 420
 gatttg 426

<210> 1251
 <211> 431
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-F6
 <400> 1251

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 gaatctcctt ccattggaat ggctgccaaag cgtgaggccg cagcaatcat gttatccagg 180
 gggctcgaag agtgacccga tgggtgtaggc acatactgtg gcagggttaac tgtccgtcga 240
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gctgtcggat tactcgcccc ggcgcctggc gtttgaaaga gatttattcc ttcgtaaacc 360
 ggtggcaggc ggcaccgata cttcgttcat aacacctcct ctgacgcggt ccggtctagc 420
 atgagccgat a 431

<210> 1252
 <211> 397
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-F7
 <400> 1252

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 ctccaacaag gtacattgct gatatgagac tttgataatg cagtgtccgg aagcgacaag 180
 caaaatgtta attctgtgag catcactgca ccgatgtaat gcatgtagac atgttaacat 240
 gtgcttagct atactgtaga aattggtaac cctttgcaat ttgggttgcac ggttgcttga 300
 gagagaccat cttcaccta tgccacatac tgcatgctta catcttacgt catccaattt 360
 caggacactt gcaactgctc tacaacctc agcacat 397

<210> 1253
 <211> 359
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-F9
 <400> 1253

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 ccctgctctt cctgagggca ccgtcgtggc ctcaacatag caagaagagc ggcacggctg 120
 gatcggcgaa agagatggca ttttcctctg accacactca cccttgacat tctcccattg 180
 aaagatctgc ggtttacttc agctctggca ccattgaggg tgtgcgctaa ttttctttgg 240
 caaaggctgt agcttccaga gtgctaatac gaaagcctga gacttgaaag tggtattgct 300
 tcccttgtga taccctaata ataaatgcat ttggcgactt aagcacttct gcgcgcgtg 359

<210> 1254

<211> 390
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-G10

 <400> 1254

 attcacgggt cgacgggctg cgaagcaatt caaaattggt ctagattttc ttggattggt 60
 agagaaattt tactaccttt ctggaacata tgacctcgag ctttcagttg gtgatgcttc 120
 aatggaaaat tcgttcttac gagtccttgg ccaactggag ttggacttgc cggaggcccc 180
 tgaaaaggcc ccacgtcttc cggcacaagc tgttgacccc ttagcaaagt ttaggccaca 240
 gaaggagata gaacacatat tccgtgtgcc agagaagagg ccaccgcagg aagtgtcgct 300
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 gggagtcaac ttgaagaact tcccttcctt 390

<210> 1255
 <211> 404
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-G11

 <400> 1255

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 accatagaga agtttgaata cagtagatat tacaccaata tgaatttaga atgagttcac 180
 aacagtacca aaagtgggtga tttatcttct tatactaacg gagcttacga gttttctggt 240
 gagttttgtg ttgtgaagtt ttcaagtttt gggtaaagat tcgatggagt ggaaagagcc 300
 taagcttggg gatgccaag gcacccaag gtaatatcca aggaaaaaca agagcctaag 360
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<210> 1256
 <211> 436
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-G5

<400> 1256

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acggccagac ccctccgccg atgccagtca ttgctccggc gggcacgggtg agtttcattt 180
gaatggcat tagttactag tcttcacatt tgagttgcat catgctaacg atacattgga 240
aataatcttt ggtgcaacat aactcccaac aagcatcgac cgatccttct cegtctgcca 300
ctggcgcgac cggctctaca cctacacctc cgtgatgacg atttgcttaa gatcatggaa 360
gcttgggttg atggagtgt tgtatttagt ttttgttttg accttatgaa acttgctacc 420
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<210> 1257

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-G6

<400> 1257

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cccgggtggc atattttcat cagggaatcg tgcttcacc agtctgggga ttccaagagg 120
aaagtgaacc cgacgcacta ccgggagccg aggttctaca ccaaggtgtt taaggaatgc 180
cactcctatg accaagaggg gaattccttt gagctttctc tggttaacttc caagtgcatt 240
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aagtgcacag aagacaaagg ctttcagaga ttcttgga atgtgcagta caaatccact 360
ggaatcttgc gttatgagcg cgtgtttggg gagggttatg ttagcaccgg tggattcgag 420
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<210> 1258

<211> 402

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-G7

<400> 1258

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 gttagagtta atttgagcta gttegggctc aaatagccct aaagtatatc caaacatgag 120
 ggctagtttg agctagttgc atctaaccce ccccaaaaaa ctatccaacc caagagggtgc 180
 taattggagc tagttctcct agtgcattta ttgtcaatct aaccctgtca tccaaacacc 240
 tctttggatg gagttagttc aggggttagtc atgagctaga aactaactct aacctctagc 300
 taagttgagt atccaaacag ggctatgttg ttgttgttgc tgattctctt ctacgtatat 360
 ctagacatca tcaaaacatt aaggctcttc cttgttgcta tg 402

<210> 1259
 <211> 404
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-G9
 <400> 1259

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 aggcagagtg tccagcgaca ccagcacact ggtgaacttc cggccgaagc tgaggcccgt 120
 ctgctccatg tgaagacaga gatggttgat gggctaccgc acccaccggt gctgttgcag 180
 ctagcatttg gttgtttggg tctgcggtc gctcctatac tgctacttac tgcttgcgcc 240
 ctgattgtct cctgcttgc tgcactttg cacgtctcct agaactcata atgttatgtt 300
 atgctatgat gcgagtacta tatgtagtcg tggcgctctt gttaattaga gctatatggt 360
 gatgctagta tgtagatgt catgtgtttt aatggaacac ctgc 404

<210> 1260
 <211> 400
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-H5
 <400> 1260

ccgggcccgc gggggactct gcctggttcg ccaccaccgc cgccaccac cccctcatcc 60
 tcttctccg ctctctgcag ctgcgctca tctcggtggg aggtccttag gcgggcaggt 120
 tcccctagat ccccgagtc actcaatcaa atggctgacg gtgaggacat ccagcccctt 180

gtctgcgaca atggaactgg catggtcaag gctgggttttg caggggatga tgcacccagg 240
gccgtcttcc caagtatcgt tgggcgcccc cgccacactg gtgtgatggt ggggatgggg 300
cagaaagatg catatgttgg tgacgaggcc caatccaaaa ggggtatcct caccttgaag 360
taccgatcg agcatggcat cgtcagcaac tgggacgaca 400

<210> 1261
<211> 365
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-028-Q1-E1-H7
<400> 1261

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ggtcacactg cccgtgactt ttggaagcga cctgaacttc aggacgatgt ggatcgtgtt 120
cgatgttgcc aggatccctt ggccctacaa tgggatcctt ggctgccag cgctggccaa 180
gttcattggc gcgtcacact acgcctacaa caccctgaag atgccgggac ctgtgacgat 240
catcaccatc ccctccgaca agaaagatgc actgatttgt gctgaccaac taaaccagca 300
agcagttgca gcagccgctg ccgctagggc acttgctctt gccgctgaga ccccggggga 360
aaaaa 365

<210> 1262
<211> 426
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-028-Q1-E1-H8
<400> 1262

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ttcgtctgga cctttcggtc ccggttggcg ggacaaaccg ggaccaatgt gccttgctcc 120
tggcccacca ccattggtcc cggttggagg catgaaccg gaccaaagga cgcccattag 180
tcccagttcg taccaccaac cgggactaaa gtgttggtcc tcgttgcggc cagagtttag 240
tcccacctcg ccaaccgaag ggggctcaca ccggtttata agccctccc tctctgcctt 300
gttgagctcc tctcaaaatg aaaatagatg cccttataca ggaaatttga cctanattca 360

tactgaattt ctctgaagtt agtagaaatt tattatgaat ttaggttgaa ttttctctat 420
aagctc 426

<210> 1263
<211> 405
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-029-Q1-E1-A4

<400> 1263

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gtcaacatcc ccgattcagc accgagctcg caccggtgga gatcgtgggtg ggaggatgtc 120
gtcggactac tcgtcgtcgt gggcgcgcg cgtcgtgcat atctcgccct acaccttctc 180
cgccatcggc atcgccgtct ccatcggcgt ctctgtactc ggcgcagcat gggggatctt 240
catcacgggg agcagtctca tcggggccgc catcaaggcg cccaggatca cctccaagaa 300
cctcattagt gtcatcttct gtgaggccgt tgcaatttat ggtgtaatcg tggcgatcat 360
cctccanaca aagcttgaaa gtgtgccaac atcgcgaatg catga 405

<210> 1264
<211> 343
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-A5

<400> 1264

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ggaagaaata ttcaagccta ctgatgacag caccctcagc gtccttctc ctgagaagaa 120
ggtgcgaagg atcagagact ccccttcaa caagaagagc ggctcgggtc tgacagaat 180
ggcgagctct tcaacaggga cagaagatgc tgaggctcct ccctccggca gctctgctga 240
gccagttgta ccgagaagga caacaaggga gaggaaggca gcagtagtct acgttgcttc 300
tgagagcgac catgatgatt ctgaggatga aaatttttcg gaa 343

<210> 1265

<211> 451
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-029-Q1-E1-A8

<400> 1265

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 tcatccgcct tgtcatcagc agccttcact ggacttgacg gtttatcagc agccttaact 120
 gggcttgacg gtttatcagt gtctcggacc gggcttgacg gtttatcaga ctggcctgtt 180
 ggggtcaacct ccacttggtc aacaacaaaa tcataatctt gcggcggtgg gtcattaagc 240
 atggcatcgg catttgatc ctccagatct agagtttttt ccggttcaat agctacattg 300
 tcgtcagccg gtttatttaa ccgggccttc ttgttgggtc aaggtttggc actgaagaga 360
 acaaacataa aggtcaatac atcggacaaa tataatatat caaggataaa attaanacat 420
 aactcaacca ggaaccgtct tgaggggtgg a 451

<210> 1266
 <211> 240
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-B1

<400> 1266

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 aatgattaag agaatcggga gtccggattt atagtttcac aaattctaca agctcgagat 120
 tggcttaagc ttagggtgtc tgcacctcca aatcgttctt ggatcaaact acgttgtgat 180
 cgagatagag tagaacgcat caatagagaa gatacggaga tctagaatct atatactgac 240

<210> 1267
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-B2

<400> 1267

gggtcgacgg gaggagggtc agcgcgaggat tccagctcgt cttccgtctg atcaacgggc 60

tgatattcat aacattcatc tccatcatca taatcttaac agtaatcgcc catatgacag 120
tccttgacat ctctgtctgc atcctcgctt tcatgcgac tggatggggc ctgcttctga 180
ttgctcaggc gatgaagcct gtcgtcgaaa tggtcgggct gtgggggtcg gtgaaggctc 240
tcgccccggg ctacgagatc ctgatggggc tctgtctgtt catgcccata gcgttccttg 300
cgtgggtccc cattgtgtcc gagttccata ccaggatgct tttcaacgag gcgttcagca 360
taggcctgca gatctcccgat atcctcggcg 390

<210> 1268
<211> 411
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-029-Q1-E1-B3
<400> 1268

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ggccatgacc tcaagttctg cagctaggcc atgaagtgtt ggtccttctc accgtccacc 120
gatgatggtg cccgagagaa gtcggggaat gagaaaagga tgttgctgtc atggctcgctg 180
aaacgacttg ccgtggacgc agtcacgcac tggatgcat cgacgactag ccgtggacaa 240
gcacctcgcc gcctccgcaa aatatggatg cacgggattc tggactaac attgtggagt 300
gtgtgctatt tcggtgttgt gacttataca ctctgtggaa gaaacccccg gcttgattta 360
caggatgatgc tgatttgtct gggatctact tccgatagat taatttggtt t 411

<210> 1269
<211> 429
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-029-Q1-E1-B6
<400> 1269

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atcatatccg aaccaagctg agcctttgca taatcttttt agggttttgc tttgttgaat 120
ttgcgggttc atcgctcggtc tagttgctgg tcttagagtc tagtctttta gagtttcgag 180
ttctggatcat aagttgtcac gccgcgcgcg caccatcatc atcgccctgc catctaccac 240

caccgctccg aattcgtatc catataccac caccaatccg tgcccatata ccaccaccga 300
 tccatatcca tatactacca ccgctaccac caccgctgcc atataccacc accatatatc 360
 caccaccaat ccgagttcct tgcttattag gtttggttttc gggatccatc tagattccgg 420
 ttcgtgttt 429

<210> 1270
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-B7
 <400> 1270

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 actactctac tatacgaatc cggtttacta ctcagagtca tacggattag tgtcaaagtt 180
 tgcacgcgac taacccttta cgacgaactc ttttaccacc tccataatcg agaaaattcc 240
 ttagtccact agatactacg gacaagttcg accgctgtca tgtgatccat tcccggatca 300
 ctattgtacc ccttgactaa ctcattggca ggcacacttc aggtgaggta cacagcatag 360
 catattgtag agcctacgtc taaagcatag gggacgacct tcgtcctttc tctctct 417

<210> 1271
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-B8
 <400> 1271

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 ctgatttttt ggagttccat aagtttgctg tagttacaga ttactacaga ctgttctgtt 120
 tttgacagat tctgtttttc gtgtgttgtt tgcttatttt gatgaatcta tggctagtaa 180
 aatagtttat aaaccataga gaagttggaa tagagtatgt ttaacacgaa tatatataga 240
 aaatgagttc attacagtac cttaaagtgg tgttttggtt tctttcgcaa acggagctca 300
 cgagattttc tgtaagttt tgtgttgtga agttttcaag ttttgggtga aagatttgat 360

ggattatgga acaaggagtg gcaagagcct aatcttgggg atgcccattg caccccaata 420
 taatctaagg acacctaata g 441

<210> 1272
 <211> 405
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-C5
 <400> 1272

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 agcttggcac tgatggtgaa ggtaccacca gtgccgtcct ccttggcgga caccttctta 120
 gtctcaggtg gagctgccat cgtctgcttg cacttgccgg tggagctcga tgggtgcgtcc 180
 tcgacggtag cacagcactc cgaagaggtg cgcttgccgg agtgggcata agagctcttg 240
 ccggactttg tcttcttctt ccgcccggga gcttcagcgg caagtatggt gtgatcagct 300
 gcggtgctg cttcccggtg gatcttgctg gcgcagataa gggcatcttt cttgtcgccg 360
 gggacagaga tgacacttat cgggcctggc atcttgagca tgttg 405

<210> 1273
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-C6
 <400> 1273

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 cttattcata aaggcaaatt catccttggc ggtatgcttg gataaaacaa ctagattgcc 120
 tggggcggtg tatgccgtgc cagtaacaac aacgtcatca tccttggcgg ggcttgacgg 180
 gttgatattc tccttagcag ggcttggcgc tttggcagta gggctcggcg gcttgggtacc 240
 atggcttggc ggatcagcag tttgatttgg aggggtggca tcagttgatg tatcgacctg 300
 tatcttcggt tcagcctttg gcggattagc atcagcacct ggattttcca gagtagagtg 360
 gtctgtggca gtctcaggat ttctgccttc atcttcaagg ctcttctccg aatcaacttc 420
 at 422

<210> 1274
 <211> 404
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-C7

 <400> 1274

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 gatacgcccc tgccaacagc ggacgttcaa cctgtcggag tgtgctccgg cacatcacca 120
 tcccttgagc aagctcctcg atcctactta cgaagacccc toccaacgtgt cgttcaatgg 180
 caccaaagct ctgcgaaccg cgactgacaa tcccggattc agcctgcagc gtcaagccag 240
 tgaagtaagc aatttcaccc tttacgagac gcatgtagct caaagtttga atccatgcat 300
 gatctaaact cccccacctt agccaggcct ggacatgaa gtccaggtag gttaactgtc 360
 cggtccccgt agcagacgac ccatcagacg cccgattgac gggg 404

<210> 1275
 <211> 455
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-C8

 <400> 1275

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 gtgaaattga gaaatacttg tggtgaagtt tgcaagtccc gtagcatgca cgtatggtaa 180
 ccgttgtgta acaaatttga aacatgaagt gttctttgag tgtcatcctt tgtgtggagg 240
 tcgggatcgc gggatgggta actcctacca acccttcccc taggagcatg cgtgtagtgc 300
 ttggttttga tgactttag atttttgcaa taagtattgt agttctttat gactaatatt 360
 gagtccatgg attatacgca ctcttaccct tccatcattg ctagcctctt cgggtaccgtg 420
 cattgccctt tctcaccttg agagttggtg caaac 455

<210> 1276
 <211> 391

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-D1

 <400> 1276

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 tacctacggg attagtttta aacctcaata attgttattt agtgccagct ttgagcatga 120
 acattgtatc tggatctcgt ttaattcgag atggctactc atttaaattcc gagaataatg 180
 gttgttctat ttatatgaga gatatgtttt atggctatgc cccgctgggc aatggtttat 240
 tattgatgaa tctcgaacgt gatgttacac atattcatag tgtgaatacc aaaagatgta 300
 aagttgataa tgatagtccc acatacttgt ggcaactgcc ccttggtcac attggtgtca 360
 agcgcatgaa gaagctccat gcagatggac t 391

<210> 1277
 <211> 419
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-D3

 <400> 1277

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 caatatgcgg ttctatcctt ggtgggacct tcgagtctct ttaggatagt atcgcatatt 120
 gggcgtgaca gtttagttga tttggatcac gtgatcactt agattattag agggatatct 180
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 gttttatatg tgttcctaga gaaaactaag ttgaaagatg atagtggcaa tgatacgaac 360
 tggacccatg atctgaggtt tatcctcatt gctgcataga agaattatgt ccttgatgc 419

<210> 1278
 <211> 402
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-D7

 <400> 1278

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 tcaaagaaga tagcgccctt ttcttggtcc ggaaactcaa gcctgcaaag catgtattct 180
 atatgaaaac atctaaattt tgagtgtcaa atcttcaagc agtcaattgc cttgaagcac 240
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 aacctttttt gcatctaate atcatggatg atacgtaca acccaaccac ccaaatacca 360
 ttactcttga tgcagacata agctaaatag ctaacttttt tt 402

<210> 1279
 <211> 360
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-D8
 <400> 1279

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 aggactcagt cgagagctta tatatgagaa ataatgagac acatacgacc atatgtatgc 180
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 gcaaagtgc tttcttcgat tgtagagaga taacatagaa ttccacatag actgcaatca 300
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<210> 1280
 <211> 409
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-D9
 <400> 1280

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 agaaatctat tcaagcctta agaccagaag caagtttaat cttctcgttg gatgaacatc 180
 tggctgaccc tacaattaaa atggaactag caatgttatc aatttttttt acagcggctt 240

gaagttttga ccaacatgtg cgtgatatta ttgactatgc aatttactta agtagcatta 300
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 agcaaatctt tgaggatttt tcggatgtct ccaaggaaat gggcaattc 409

<210> 1281
 <211> 368
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-E2
 <400> 1281

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 gaactgaacc gatggagcta ccatggaacc ctctggccat ctgatgtgtg tgtataagta 180
 gtgctgacac tgcagcccggt ttcctgagga aatttggttg gtcgttgaaa ttgagttgta 240
 gttgtactac tttgagctgt agctgtagcc ctaaatacata ttgtgtogaa ctgaagatgt 300
 accccagtaa gttcattcat gaatgcaaca ttttggcggt ctgcagctga gcagagtcaa 360
 tgcctagg 368

<210> 1282
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-E3
 <400> 1282

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 tgtttgcccta taacatgcct atgcatagga agtatgttag acttagatgt gtttttcaca 180
 tgtttcatga tgctctcttt gtgtttcaat tattatcttt catgtgagca tcgttgaaat 240
 tttatgccag ctaggggcgt taaacgatag cgcttggttg gaggcaaccc aattttactt 300
 ttgtttttgt ttctcgcttt ttgattctgt ttagtaataa ataattcatt tagcctctgt 360
 ttagatgtgg ttttatgctt ttaattagtg tttgtgcaa gtagaacctt tgggaagact 420

tgggga

426

<210> 1283
<211> 443
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-E6

<400> 1283

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cgaaacgggc caccgagctg gaccgagcga aaacaggctc ggctcggtcg ctgaacgggc 120
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tagaacgagc ttcgagccga gctaaaatgc tcgctcgtag gtccagccct agtcctaggg 240
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gtcctaatac agtcttcaag tcacggagcg tctcgaattt tcttgagcta ttcttcatac 360
atcagtcatt ggttttgaaa actgggttaa caagtcattt cgtatccaat ttcttgatag 420
tctaattgta cccgaggagt ttt 443

<210> 1284
<211> 395
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-E7

<400> 1284

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gcctcgca ga tagctttg acagatccta agagggtcaa gaggattttg gcaaatacgc 120
agtctcggtc aaggtaaaag gagcgcaaga tgaggtagat tcaagaactc gagcataagg 180
tacaggtctt gcagacagag ggcactacgc tttcagcaca gttgacaatg atgcagaggg 240
actctggagg acttgcgact cagaacaatg agttgaaaat aaggctgcaa gcaatggagc 300
aacaggcaca gctgagagat gctctgaatg aagcactgac gggtagagtc cagcggtgta 360
aacttgcaac cggtagagatt acggatgctc gtagt 395

<210> 1285
 <211> 309
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-E8

 <400> 1285

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 acgatcgtgg cggcggccga agtgatcgcc atgtactaaa gatttctagc gacggatggg 180
 ttcagtgtgt ctttgtcagc ggaggttttg cggctctgtct gtgtctcaac gtgagggggc 240
 aatgtgaagt attatgaagc agcacatgta actgcagctt ttatgatgct aaacacatag 300
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<210> 1286
 <211> 397
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-F5

 <400> 1286

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 atgttgagca gcagaatgcc caaggcgcac atagttctac agaagagggtg aaggaggaag 120
 taaagtgcac caaggccatt atagagaggc tgatacagag ggaaggccat cttgtagtca 180
 tagatgaagg aacagcggca gcagaagggtg ctacggcaag ggcacggag cacagaatcc 240
 tggtgtgtaa cccaaactac gtcattgatt gattaaccag ctgagggtcac acagctaact 300
 agatccatca tatgtggttg accaatatag cagacattca aacggaagac atcctgttgt 360
 catgctctag aaatgatatg ttgcacctgc catcccc 397

<210> 1287
 <211> 437
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-F6

 <400> 1287

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accggaacct gtggtggctc cggagttcgg cgggcggccc cttcataaga agggcaagac 120
cgtgacgccg gcggcctcca tccaaccggg ggtgccggat agcttgatgg aggagctcat 180
cggcacttgc atcaaagagg aacaccgcac cgtcatgagt gtggtgattc agaaggttca 240
gctcgccaag agcgggctga ccgaagcctg catcagcctt ttaacaggct ttgaggttaag 300
aattttgata tatgtaaaat agtaccgcat agacagtagc cgccgatgct cggttcgggtg 360
ttcggaaaga aaagccggac taaggatcta aaaagatata cgcaggagtc ataaaaaata 420
tgtcaatatg ggattgc 437

<210> 1288
<211> 416
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-029-Q1-E1-F8
<400> 1288

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agccgcttgg ccgtgctgaa gacgaagagc attccagtga ctttgagcca gaagaaaatg 120
gtgatgggtgc tgaggacgag gagattgagg atgatgatgc tgaggatggt gaggattctg 180
tcaaggcgca atcctcttcg aagaggaaga ggtctggcgc ggaggatgaa gatgatgatg 240
acggtgatga tgatggtgat gatgatgaga agcctccatc aaagcgatag tcaatttgtt 300
cttgctgata tggtatcttt tctgcttggg ccaagaagga aaataatcct cacggagagg 360
gttgttggtg aatgctgtag ctttaggaca tctgtggtag gtgtaacagc tcgaac 416

<210> 1289
<211> 421
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-029-Q1-E1-G1
<400> 1289

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tttgacatgg agctcctgag ggaacagagc tccgaagaac agatgattca gcttctacaa 120
 cttgctatag actgcgttgc ccaagtccca gacgccgctc cgacgatgtc ccatgtcgtc 180
 gtgcgggatcg aggagatcaa gatgtcaggt ggaagcacgc aagaaactga tcaacaacag 240
 cagagcgccc tgaatcaggg cgatgagatg gtcgagggcc cctcctcgcc gtgatctcta 300
 atggcctgag agaaaggagc cggctgcctg tcgctgtagc ccacattcat tccgttcata 360
 gacttgacga atgctatctt cctcttcgac ggcgganccg gctgtttttt catctcttcc 420
 t 421

<210> 1290
 <211> 433
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-G6

<400> 1290

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 cactctttta cccttccacc attgctagcc tcccttgatc cgtgcaactt tcgccgggtac 120
 catatacacc caccatactc ctttctctca aacagccacc atacctacct attatggcat 180
 ttccatagcc attccgagat atattgccat gcaactttcc accatttcgt tcatatgaca 240
 cgcattactt ttgtcatatt gctttttgca tgatcatgta gttgacattg tatttgtggc 300
 aatgccacct tcataatttt cacacatgtc gctcttgatt cattgcatat cccgggtacac 360
 caccggaggc attcatatag agtcatatct tgttctagct ttgagttgta aaaccataaa 420
 agtgtgatga tct 433

<210> 1291
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-G7

<400> 1291

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ggtgaggaga atggcgagga tgatgaggaa gaacaagagg agcaggaggg tggaggaggt 180
gacgacgatg atgatgacga cgacaacgac gatgacaatg aggacgacga cgatgatgac 240
gatgatgtcg ctgctgaaga cgatggagat ggagtagaag aggaggatga tgacgatgag 300
gaggaggagg acgatgagga cttgctccag cccccgaaga agaggaagaa gtgaagccct 360
tcgacgcggc tgcttttagtc accatgcgac gagatgtgcc tgtccttcac tgtgttc 417

<210> 1292
<211> 376
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H5

<400> 1292

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tccgcctccc tttcgagctg gatgtagttc ggccgagagt tccccgacaa ggagatagat 120
ttcaatgagt ttaacacatc gcctagaggt gagtgtgga agatgtccac ggagctgaac 180
tccaagatcg gtgccaatc aggttcgatg gacgcggatg cacgcgggtcc agaacctatg 240
gccgagacga gtccgaggtt ccggtaacac aagcccagct tgatgttggg tctttgtgcg 300
gctcgagcgc cactaagtct gcggttccg tggcgggggtt aagtttctctg tcttcagacg 360
acgcgatctg ctccag 376

<210> 1293
<211> 242
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H8

<400> 1293

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aacctcgccg ccgtccgtca caactccaga attccctccc catggctctc atcaagatcc 120
gcatcaatgg ctaccgccg gtccggcacgc tctgtggaca gagttgcgct ccaaaaccac 180
gatgtcgagg acgacacggt caacgacacc ttcaacacca ccgactacat gacctacatg 240
tc 242

<210> 1294
 <211> 391
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-A4

 <400> 1294

 gggtcgagtg acatgaacct tcaagaagaa gagatcctaa agttggcttc attgggcaac 60
 catggcaacc ttgagaatgc tggtgacgtt ctgaagagat cacttgctct ccgcaacaag 120
 agctacaaag acttgatggt ccaatgcaat catctgggaa gatcagaaag tcgcgctcag 180
 cagaggattg agaaggacaa agagctgata aagaagttga gggcaaaggt acttgatctt 240
 cagaaggaac tggaagaaaa ggaaaataat gtcacagag acttgaggtc ttcaaagaaa 300
 tttaaagctg accagaacca gacaaatcca gtgaatgcca atgctaataa tggtttctct 360
 agtccaagtg ctggatatgg gaatcaaaca g 391

<210> 1295
 <211> 408
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-A6

 <400> 1295

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 cacaagtcca tgtgctacag cctccatgtc catgtcctcc ctttcttcag gttctacagg 180
 ggagcccagg gcagggtcag cagcttcagc tgcacaaatg caaccatcaa gaagttcaag 240
 gacgccctcg caaagcactc gccggacagg tgcagcctcg gcccgggcgg ggggctcgag 300
 gaggcggagc tcttggtctt ggccggcaaac agggacctgg aattcaccta caacgagaag 360
 ccgacgctgg tgccgatcgc cgaagctatc cagatggaag ctgcctcc 408

<210> 1296
 <211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-A8

<400> 1296

attccccgggt cgacgggtat agataacaat ccttcatgtc ctattattct tggtagacct 60
ttccttagaa cgattggtgc aattattgat atgaaggaag gaaatattag attccaattt 120
ccattaagga aaggcatgga atactttcgt agaaaaatat taaattacct tatgaatcta 180
ttatgagagc cacttatgga ttgcctacca aagatggcaa tacctagatc tattcttgct 240
tgttatgcct agctaggggc gttaaacgat agcgcttggt gggaggcaac ccaattttat 300
ttttattcct tgctttttgc tcctgttttag taataaataa tttatctagc ctatattttg 360
gttggtgtttt ttgtgtttta ttagtgtttg tgccaagtag aaccgttgga aagacttggg 420
gaa 423

<210> 1297

<211> 406

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-B1

<400> 1297

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aggaatccct aagactccaa taagtcattg agtggttgat cagtctcacg ctatatcatg 120
acagtccgtt ttcggctttc tctactgagg tgctcgtctg gatgaaccag ggagcggaac 180
gtaaggcagc aaaacacagg agccgggcaa acctaacatt tgaccaaaga catgatttgg 240
agctgatgca tataaggcca aactcgcgac gccgaacact ccctaaggta ttcggtcttt 300
atggtgtaaa ctgggtctaa atagtaccct ttgtaataag cccctggtgt ccaggtacgt 360
gcattattct ggcgtggcca catgccaaga cgtcagcatc cttctc 406

<210> 1298

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-B2

<400> 1298

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 ggaacgccga gcaaccgacg gagtgcaagc agcagtagaa ctttgtggat gcagttgttg 120
 cagtattttt tccattgaac tgcccagggg gaatgagctt ttatgctggg tgtgttgtgc 180
 acgggtgaga cgtttggtgt ggatatttac cgtaggcatg gttttgtatc aggtggcgtg 240
 gtgattgtgc tgggtgtggga tggatggttt gggagtttgg gacggtcacg ttagcgtgtt 300
 attcttatta tgggtctctag ctatatgcag tcgaaggaca ccctaagact gtaattatat 360
 ttgaactcgt aatagagcct tttattatta ttttttgtgc catc 404

<210> 1299
 <211> 436
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-B3
 <400> 1299

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 agcttatgct tgggtcgggg tggaacatct tcttcttcat cttggacttc ttcattgttg 120
 gagttgtcgt tctcatgttg ctgtggagat cgaggttgtt tatgttcacg ttggtgtgct 180
 tccgcagttt ctacgtcttg gtgtgtcaca catgtggatg cttctgtatc aactcttggg 240
 tcaacttgct ctgaggtaga accttacact tggactgacg aggtactctc attcaactcc 300
 gattgaccaa tcatgccata ttacactctt ggattgcttc cgaacgatct ttatctcata 360
 gatcacttgg taagtgtctt acttgccatc cattacgttc atcaagcttc agaattaccg 420
 tttcgtcaac ctttcg 436

<210> 1300
 <211> 369
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-B4
 <400> 1300

ggggtcgacgg gcagaagaag aagagtaggg tgcccttctg cggctgtgtg cgccccaaaa 60
 cagtgactga gtcttgattc ggagtccgca gcaagcaatg tctttagtat ctcttctgta 120

atggggttgca tgataatggt aacaaggagc tcatgcattc ggagttttgt ccttgttcag 180
 aaatgcccc tagtttaact agttaatcct actgatactt ttatgaatcg aagcattttg 240
 taattccgtt gcccttcgct gtttctctgt gtctgcaatg aagatatatg agaatgcttc 300
 tttcagggat ataattttca ccccttttta caaaaaaaaag aaaaaaggat aaaaaaaaaa 360
 aaaataaaa 369

<210> 1301
 <211> 408
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-B5

<400> 1301

tcaagaattc ccgggtcgac ggggtgataa attattccga ggtcatagtc cttaaccaac 60
 tcgagccatc ttcgctgtcg aagggtcatg tcaggctgag tgaatatata cttgagactt 120
 ttatggtcgg tgaatatctg gcacttcttt ccaatcagat aatgtctcca gattttcaaa 180
 gcgtgcacca ctgcggccaa ttccaaatca tgagtaggat tgtttccttc atgttgctgc 240
 agttggcgag atgcataagc caccactttg ccatcttgca agagtacaca cccagtcct 300
 tttctggagg cgtcgagta aacatcgaaa ctgcggtaga tatctggaag agttaatacg 360
 gctgccgatg tcagtctggt ttttaactca ttgaagctcc gtctgcag 408

<210> 1302
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-B6

<400> 1302

attcccgggt cgacgggcaa gctcacacca atgaggttag caagggcaaa ccaactagatt 60
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 acctcgaaga gctccaagaa ctcggttctg gaacttttgg aactgtatat catgggaaat 180
 ggaggggctc tgatgttgca ataaaaagaa tcaatgacag atgttttgct ggggaagccat 240
 ctgagcaaga aaaaatgcgg aatgacttct ggaatgaagc atctaacctt gctgatctgc 300

accaccccaa tgttgtggcc ttttatggcg ttgtttctaga tgggcctggg g gatccattg 360
 caacgggttac agaatacatg gttaatggct cacttaggac ggctttgctg aaaaa 415

<210> 1303
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-B8
 <400> 1303

aattccccggg tcgacgggct gtaccacgag acggaaaaga ccatcacaat tgggtggcgag 60
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 aaacgcccac tgctccggga tgttccactg ccggtgcggg caaggtctaa ctgggatcgc 180
 ctctcataa atgatgacct cggctatttc cgggacgtaa ctatcagccg aaacaaagac 240
 tcgatcaagt atgttgagtt ggaattccgg tcaatagaag tgctcaacct cgccaccacc 300
 cctgtttcct acaccgactg ggtggcgggtg aagaattcct caaggaaatc tcttcatgtc 360
 atccgcgatg gctggaagtc cacaacatgg agcatggcaa taccggttg tttgc 415

<210> 1304
 <211> 369
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-C10
 <400> 1304

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 cgtgccatcg tcgttcgagg acgtgtatgg cgggacactc ttcgaggaga gtatgaccat 120
 cctcgactct gagagttaaa agtcattcaa tgatgcttta tctgcgcatg accatatggg 180
 aatcggcaca ttattgcggg aatgccatgg cttactcaat ggcttgcagt cacgcacga 240
 cagtcgaggt ggtgatggaa tgagatctag ggccaatgta tacgccttcc ctcaaataat 300
 atgcacgtg ttggaccctt caaagagtat caataaagct ccaagcgatg gcctcgttaa 360
 cgatatctc 369

<210> 1305

<211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-C2

 <400> 1305

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 aaggcatgtc ggcaactcgg catagacgga cgggcaatca gtttcattag atcgggtgca 120
 aaaagaattg tgtgagagag atgcgcttgg caagtaagca tgtcaatggc gcaggaccgg 180
 tcaaaatgtg ccacatcagc gaaatacatt ggatacggta gggcttgacc gtagagtgc 240
 acatttctgc gacctcaatg accatatttt aaccttttg aattacggtg atgaaagtga 300
 accctagagt caagttcagg tactaaagat gtaatttact cgatataatt tgggtctcatc 360
 caacttttat agccattgga tgtgatgcta taagatgcat gtgtg 405

<210> 1306
 <211> 243
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-C3

 <400> 1306

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 gggacgatca atgatcgaag aatatcaatc tatcgatata ccggtggctta caacctggtc 120
 agaattattc cgtatatgaa gttgaatcag atcatgtgga tttacaaaat ttgagcgaga 180
 atgtgttgca tgtttagaat atgatccctt accctgcatt gaatcaattc gttgcgatct 240
 att 243

<210> 1307
 <211> 434
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-C4

 <400> 1307

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atcacagaaa ctacacctag tagatcctgt ccagttgcgc ttaatcaaat tatcctttgt 120
 taaaattact tgtttatgca caaaccacat aaacacttta atcttcaaag ggactttgac 180
 ttcccaaaca tgtttggaaac tcggaataac actagagttg atgacattga tatacatcga 240
 cttgaccgtg aagtctccag acctagtaag cttccaacgc aactgatcag gctgatgagt 300
 tagctgaacc tccatcagtc tactcactag atgaagccat gtttcccacc ggtcaccaac 360
 aagcacctc cgaaattgaa tattaagagg gattgagga gtcctggatt aaggggtgtt 420
 ccgatatccg gact 434

<210> 1308
 <211> 353
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-C5

<400> 1308

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 aggggaacaa cggccggtag gccacattga accctaattg aactccaaat gcaaagtgtt 120
 ttcacagcga gctatgactt cgaccatgtc gatgttaacg tcagtcgaaa gcgcaaagac 180
 gtgaagtcct cctacgtgcc acgcaaaatg tcggactcta tgatctgcgt gcaagaaact 240
 ctccaagaac taatgtttga cctcgagggg gttttcttgg caaccaatga cctgacgaca 300
 actccgacat tatcaggacg agcataactca ctacaccag acatgacggg gac 353

<210> 1309
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-C7

<400> 1309

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 aactagtaca aggatgaaca agcctgagga ggtgaggtgt tcttgagctg gtgtggtgct 180
 ctgcttggtc tgattccggt cctcttctat ggtggtggct aagtcctata tatagtggcc 240

ttggtcctct tcccaaatat gagaggggaag ggattccaca acggcgggat ttgaaaggtc 300
 acaagtagta cagtctatcc tgacaaaagt agtcttcgcc tacgaaaagc ctctggtcgt 360
 gacgctgcgg tgggctcggt gatgacctcc gtcctgtcgt cctggcggtc ttgggt 415

<210> 1310
 <211> 409
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-D1
 <400> 1310

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 cgtccaagga gggcggcgag aagaagggga agaagaagtc caagaagagc gtggagacgt 120
 acaagatcta catcttcaag gtgctgaagc aggtgcaccc ggacatcggc atctcctcca 180
 aggccatgtc catcatgaac tccttcatca acgacatttt cgagaagctc gccggcgagt 240
 cggccaagct tgcgaggtag aacaagaagc ccaccatcac gtcccgaggag atccagacct 300
 ccgtccgcct cgtcctcccc ggcgagctcg ccaagcatgc cgtctccgag ggcaccaagg 360
 ccgtcaccaa gttcacctcc gcctgattcg gtcctgtccc tgtgtgtgt 409

<210> 1311
 <211> 374
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-D4
 <400> 1311

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 aaacagccac catacctacc tattatggca tttccatagc tattccgaga tatattgcc 180
 tgcaactttc caccgttcgg ttcacatca tcacacata cattactttt gacatactcc 240
 cattgcatga tcatgtagtt gacatcgat ttgtggcaaa gccaccatgc ataatttttc 300
 atacatgtca ctcttgattc attgcacat cccggtacac cgccggaggc attcatatag 360
 agtcatatct tgtg 374

<210> 1312
 <211> 431
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-D5

<400> 1312

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 gttgatgctt tgaaacttag atctatccca cctaagcatg atatcaatga gtctctaaaa 180
 gccatgagaa tttcaattga tgagtgtaaa gaaagaaccg ctatgatgcg tgcttcaaaa 240
 gatgccttta ttaaagcgtg ttcttccaat tcctatgaaa atcaagatga agatctaaaa 300
 tttattgatg tgtctccaat taaatcttta ttttgcaata tgaatcttga cgaaactgaa 360
 tatgatcttc ctttacctag aaggcgttct aaaaattcgg agtattttaga tcttaatgat 420
 gaaattgatg a 431

<210> 1313
 <211> 306
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-D6

<400> 1313

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 tctaagccat ccgcctcatc gctagcatca ggatcgcacc tgacaacaag aggagtagca 120
 ggtactgttc aaggatgcta ctacgcacac accattacct aaggttgttg cgttggctaa 180
 agttaacgtg gatgaattgc catcgaacct acaggtggaa tcgtttcttg aatgcagccc 240
 ccctagtctc gggtttcctt gcaaggctcc caataattct tatcaacaag ttaagggtcaa 300
 ggggttt 306

<210> 1314
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-D7

<400> 1314

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tcggttccgt gaagcagggg aggaagacgt cgatggactt ggcatctccg gccttggatc 120
gcagaggaac ggggtcatgg cggcgtctcg atgcgcgtgg gtggagatag ggtcggcgac 180
gagcttgcta cgccggagga aagcttgagc acgagccggc catggcgctg ggcggagggtg 240
atggggcgag gtggagctac ccttacctgg ctggtggcgc ggaggaggaa gggaggagga 300
aggggaaacc ctagggaggg ggcgctgggt aaaaaggacg ggcgtgggcg ccgtggtagc 360
cacggtggcc atgtgccct gaatattact gtgagtggag 400

<210> 1315

<211> 143

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-E11

<400> 1315

ccgggtcgac cgggcgggag gccctcacgg gccgcaccgc tggccgaccc tgatcttctg 60
tgaagggttc gagttggagc acgcctgtcg ggaccgaaag ttgtgaacta tcctgacggg 120
caaccagagg aacctgtgag ctc 143

<210> 1316

<211> 426

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-E2

<400> 1316

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gccatcacc acaaaggact tgcctcacta cggtagatct tcacagagta ggcaatctct 120
ttgccagtac aaactccttg gttcaactcc acaatcttga gagatgctcc caagtgatac 180
ctaagcaata taggagacac cactctccaa aaggtaatat atggtgtggt gatgatgaac 240
tccttgcctc tgtgcgtcaa atgatagtct cccaacact cgactctctc tcatatgatt 300

ggatttggtg gaaagatgat ttgagtggaa agcatcttgg tgaaggctag agatcaagat 360
tcatatggta ggattggaat atcttggcct caacacatga gtaggtgggt ctctctcaga 420
aaatta 426

<210> 1317
<211> 407
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-E3

<400> 1317

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ttggtgctcc attattcatg gagacgccac actcttggtc aatgtacgct gaaaaggatg 120
atcactgttt tgacgaggat gttattcctt gtgagatgga tgatgacgat gacatcgtct 180
ttgaacatag tggatcgag tctgacagga aaacatcagg atctatggct tcatccgatg 240
ttctaaatgt gaatcaactg atggaatctg tccatgagac agcaaggcaa gttgctaaca 300
ttccagtctc caccaatcct gtgtcctatg accaaatgaa gagccaatgt gaatccctag 360
taatggaaaa gcagcagaag atgtctgttc tcatgagctt caagcac 407

<210> 1318
<211> 400
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-E4

<400> 1318

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caggagatgg agctctccct gggtggccta cagaatgctg ggaagacatc tctagtcaat 120
tcaattgcta ccggtggcta cagcgaggac atgattccaa ctgtacgctt taatatgcgg 180
aaagtcacca agggaaatgt cacaattaaa ctttgggatc ttggagggca acgtagattc 240
cggactatgt gggagcgcta ctgtcgtgga gttactgcta ttttatacgt tgtcgatgct 300
gctgaccggg atagcgttcc gattgcaaaa agtgaattgc atgacctgct gacaaaacag 360
tctttatctg ggatcccctt acttatecct ggcaacaaaa 400

<210> 1319
 <211> 365
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-E5

<400> 1319

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 cattccgcga caatgtagct gttgggggcc gtccttgaac tcaagcccac cactacttgg 120
 agcgagccac ttatcctctc agccaccaca tcggaatcac ttgtgggtac tctacgagcc 180
 gaccctacct tattcaccac atgtatcata taccatgtat gtcattacgt ccccgatgatc 240
 atctcccaat tgatcatggt cctattccat atcatggcag acggacaata atgtatggcc 300
 actgattgtg acactatcat cctatactaa gcatttaaga ttgtaggtaa aggtaacaac 360
 atcta 365

<210> 1320
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-E6

<400> 1320

aagtcccggt tcgacgggat aggtcaccca ggaagcgaag ttacagcagg tctccaccgc 60
 ctgcccgtgc gcgaagcacc agcaggtctc caccgcctgc ccgtgggcga agcatcagca 120
 ggtcacccgc gcctgccggt gcgcgaagca tcagcaggtc acctccgcct cctcgcaaca 180
 gaagcatcag caggtcacca ccgcctcctc gtgccataag catcagcaag tcaccaccgc 240
 ctgcccgtga acggagctat agcaggtccc cagcatagcc actccagcgc gaggagtccc 300
 cttatgctga taacgcgtga gcacttggtt ccacaatgct ggaagtgttg ggggggtgggg 360
 gcctccgctt gtttccttga atgttttgggt atgactattg aatgg 405

<210> 1321
 <211> 372
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-E8

<400> 1321

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aagtctgaat ctgttaacga aagttactat gttcacatgg ttgccattgt attttctgat 120
cccttttggc ttatggtaag taagggactt ttgttgatg ctttgagtag cttcatgcc 180
tgccttgctt tgccatgata tgttcatata gcatgttggt atcatgctct aaacattgca 240
tcctgatgtt aaattccggg caagttgtta ttttctctaa gtctgtaacc tgatatcttt 300
tgcacttttg ccatgcttgt ttgaacctgc tattatgtga gttatccgta gctcagtgtt 360
catcttgtgg ca 372

<210> 1322

<211> 250

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-E9

<400> 1322

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gtcgcatgcc atgaccaaag ccacggaaag gctcatcgcc aatgatgctg cgcataggat 120
gaactaagcc tagccttata tgctagagca tatgccatgt aatttccctt tcagtgtgtc 180
atgattttga cgaagaactc gaaccctttt agcatcactg tggaatcgta ttgtgggttt 240
ctgattctta 250

<210> 1323

<211> 377

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-F1

<400> 1323

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ttgtaatgcc ctcgatacgg ctatatcgcc tacgtgtcga gccatgactt acatgcataa 120
ccacattcaa agcattgtcg caagtaaggc actcttcaga acatcccatg tttatagata 180

ctacaaggga aggtacatag ttggcttaca ctgccatat cacacatagt acatatatag 240
cattacatca accaatcaat catggcacga ctaccgtgcc aaactaagag atcaacccaa 300
catgcgacac agtccccgatc gctccaactg ggcaccacta ctgatcatca gggaaagaca 360
cataactaact gcgtgag 377

<210> 1324
<211> 438
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-030-Q1-E1-F2
<400> 1324

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ttggagctat atttgatatt gctacatgag atgtgttttg cttggatcgt cgtacactat 120
actagtcatt gccttttagt ttatcacaat catccttgct gtgcacacct ttttgggaga 180
agcctacttg gttcgaattt gctagaatac gtctatgtgc gtcacgtag atcttttgag 240
cttgatagtt tttgctctat tgcttcactt atatctttca gagcacgggtg gtgtcataat 300
tttgaataaa ttgctaattc gtcattgctt acttatataa ttgtgagagt ctttttagacc 360
aacatgggtga ttgctatggt cataaagttg gtcctagatt gatgagcatc ccagttgggt 420
ataatgttgg ctatctta 438

<210> 1325
<211> 407
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-030-Q1-E1-F3
<400> 1325

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ggcaagacgg cgtccaagga ggccggcgcc gagggcaaga cccggggccg caagaagggc 120
agcaaggcga agaaggcgt ggagacgtac aagatctaca tcttcaaggt gctgaagcag 180
gtgcaccctg acatcgcat ctctccaag gccatgtcca tcatgaactc cttcatcaac 240
gacatcttcg agaagctcgc cggggagtcc gccaaagtgg cccgctacaa caagaagccc 300

accatcacct cccgggagat ccagacctcc gtccgcctcg tctccccgg ggagctcgcc 360
aagcacgccg tctccgatgg caccaaggcc gtcaacaaat tcaactc 407

<210> 1326
<211> 289
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-F5

<400> 1326

acgccgccag gtaccagtca ggaattcccg ggtcgacggg gaccacaaca aggccgcgga 60
ccacaatacc aaggacggcg aacacaccaa ggacagctag cacactgacg gcacgccgga 120
gaacatcaac gacaagatca gcggccacgg ccacagcgac cgcaccaacg acagcgacaa 180
aacaaaaaac cacaaaaaac acagaaaacc tgccgctcca caggatccaa ccttacgtac 240
tctactacc gacgtcataa cacttctata ctgtcaccta atgtccatt 289

<210> 1327
<211> 407
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-F6

<400> 1327

aagtccccggg tcgacctcta tatataaagg gatgaccgg cggcgggttta gggcaagtaa 60
catcggatcg agagctaggt caagcgattt cgctccctgg taatcgagac ataagcaatc 120
ccactcaaaa ctggatcgta ggcttttacc ttactgcaa ggggccgaac cagtataaac 180
cccgtgtcct ttgtcccgat taaccctttt aagcttecta gttgcgatgg ctccacgact 240
aagtccttcc actaggacat ctgacatgac aattccatga tagttggcgc ccaccgtggg 300
gctagcgcac ggtggatttg agttcttgaa gggcagcttt gaagggtca agagatacgc 360
tatggggccg atgaccaaga gtcacgcgg caagctctac atcaacg 407

<210> 1328
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-F7

<400> 1328

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ctggaggcgg ccatgcacag ggtgcgctcc gagaaggacc gcaagatcgg cggcgagatg 120
agctacctcg agaacatgat cagggggaaa caagcggagc gctacgggtct gtgtgacaag 180
ctcgctcatg ctgagagccc caaggctcgtt gaagggtgat ccacctcgct gaacaacggc 240
ctggacctca aacttggatt caactaggaa cgggtgaaag cttctggccg tggggttctg 300
ctctagtgtt gcttttgagc tcgagtgtta tgtcagggtg aaatattcta caatttcctt 360
cgaagggtt gtatgaactt gtaagagacc actgtcttat gagatgtttg gcttaggctg 420
gactggg 427

<210> 1329

<211> 415

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-F9

<400> 1329

ggccagaat tccccgggtcg acgggaggct gtcgcactc atcaaatacga gcctcgacat 60
agttgttgcg gtggggctcc tgcaacttgc cccgaaaaag gtcactctc gcgtcacagg 120
ggcctttggg ttcgctagct cgctcatcgc ctgttaccag ttgcttcag ccccatccaa 180
atccaagtga tctgcctgcc cacctcgggc caggcagctg gtgcacgat tggtgaaact 240
gcggtcgctg ttgctgatac ttgataagaa ttaaactctg accaaattgt ccgtcctgta 300
agatataacc gaggattact gttgtgcatg ctggcattgc ccagagccat ctcatagcct 360
ggttgatctg ccttgcccta gacgtgatca tgtagcacc ttgtatttgg atggt 415

<210> 1330

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-G1

<400> 1330

ggtctagaat acccgggtcg acggggagggc tgacaagctc gcccgtaca acaagaagcc 60
 caccatcacc tccagggaga tccagatctc ctcccgtcc aagtcccaa ccccttcggg 120
 cggcgaagca acacaccctc ctttctcccc ctcccgaagc agcgatggcc cccaaggcgg 180
 agaagaagcc ggcggcgaag aagcctgagg aggaggagcc cgcggcggag aaggccgaga 240
 aggccctgc tgggaagaag ccgagggccg agaagcgggt tccggcgggc aagaccgct 300
 ccaaggaggg cggcgagaag aggggcagga agaagggcaa gaagagcgtc gagacctaca 360
 agatctacat cttcaaggtg ctgaagcagg tgcacctga catcgggatc tcctcca 417

<210> 1331
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-030-Q1-E1-G10
 <400> 1331

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 aagctgaagg atgatctggc ggacgcatac ctgacgacca tgactcagcc caggaagaaa 120
 gaatcatcca tatcaaagct ctggaagtca tctcgcgcaa agaacagcga cgtctccaag 180
 aaggatgcca cggaggcact gaacggcaga tcatcgaatg tgcggctgtc ggtcgggacc 240
 aattccacca tcgagagcgg cgttcaggat atcggcctca gctcgccgag cgtggggcaa 300
 tggagctcgc cggactcgat gaacatccaa ttcaaccgag gcttcatggg ctgcatggag 360
 taccgcgggc gtcccagaat cacagcctga anggaaaact cat 403

<210> 1332
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-G2
 <400> 1332

gggctcgacgg gtgaagagag tgacaacat ggataagtgt caaaacctcc aaacacagga 60
 gactctgatg ctgcgcaact cactgaggat gtacatgcaa agctggttga atagctcaga 120
 ccttggttag gtcttctact caatattctg tactcgattg tcaccgaacc ttccataatc 180

aacatgctga atcacaagac atattctgct cgctgattgc gatcgctgtc tcatctatga 240
tcaagtctta cacttggtgc taactactct acgatcagta tgttcgtata ttattagtgc 300
ttatattctt tgcattggtt cacataactg tcatactatc tcagaatcta ctactgacga 360
tcaatcggtg accagttaga catatgctgc ttgttatatc aa 402

<210> 1333
<211> 403
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-030-Q1-E1-G3
<400> 1333

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gtgccacagt ccaagcgccg gatgagaaag ctatgacagc catggaggac tacatggcat 120
aggtggctga tgggcatgtg gtacaactga acataaaggc tagctagctc acggctaatt 180
cttgtttctg tctgtaccaa cgtaatcatt ctgccaacc ggttctctc atcaggatgt 240
catgttttgt aaaggaacag actggagcct gtctgaccct agcatcgcat cctgtttagg 300
ttagctaagg cagtatcata tatttgGCCA ctttcacatc agtccatca atcatctacg 360
gtaatggtgt aaccctaaaa ttgagctggt gcagaacttc cgt 403

<210> 1334
<211> 398
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-030-Q1-E1-G4
<400> 1334

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ccaaggaggc cggcggcgag gggaagcagc ggggcaggaa gaatggcagc aatgccaaaca 120
agggcgtgga gacgtacaag atctacatct tcaacgtgct catgcagggtg caccgccagc 180
tgggcatctc ctccaacgcc atgtccatca tgaactcctt catcaacgac atcttcgaga 240
agctcgccga gcgagtccgc caagctggcg aggtacaata agaagccac catcacgtcc 300
cgggagatac agacctcgt ccgcctcgtc ctccccgtcg agctcgccaa gcacgccgtc 360

tccgagggca ccaacgccgt caccaaattc acctcatc

398

<210> 1335

<211> 443

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-G6

<400> 1335

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cgagtttga cggccgggga ccatcggaat ttgttggcag aggggtcctt ggatcgacgc 120
ccatgcgagg tcacaccagg cggatccagc gcctgcaagt cagtggccac gcgaggactc 180
cggatttgaa gctcggggcg cggcggcagg gcgtggaggc ttgcagcagt agcagttgtg 240
gcgcagtggg aagcgatggc gcttggggcg ccgacgagta acggatctcg tcggatttgg 300
ctcaggggag gcacaggacc aggaggacct cgccggatct agcttgtgta ggcgctggac 360
ccatggaggc gcggctagtc atcgggaacg ccgtggggcc acgggggctg caccggagat 420
gaagagtacg gtgttcccgg ggg 443

<210> 1336

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-H1

<400> 1336

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actttgtaat ctgcagatta cttcttccat taatcaccta gtgctcctgt tagtgagatt 180
catctagtat tttttttgca aagcatgcaa tggctctggag tagttgatca tggcctgatg 240
gaacctctag ctgaacaata agatagggtta gttagtgtag tagaggaaga aagatgatat 300
atttattatt tgcttttgcg gcttctatat acacatgtat gtatgttttag ttattcgaca 360
tgcttctgaa attgattgtg ctttttagatc gaaacactat gcttgttcaa agagtgtcca 420
tgttgtgtg 429

<210> 1337
 <211> 290
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-H10

 <400> 1337

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 ataccttacg accatgactc aggccaagat gaaagagtca gcgatattaa agctctggaa 120
 gtcacactc ccaaagggga tcgacgtctc caagaaggat gccacggagg cactgaagtg 180
 cagatcattc aatgtgcagc tgtcgatcgg gaacaattcc accatctaga gcggcggtca 240
 tgatatcggc ctcagctcgc cgaaccttgg gcaattcagc tcgccagact 290

<210> 1338
 <211> 341
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-H3

 <400> 1338

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 gtagaaagaa ttaaactccc ttggctcact tatatttgtt tagagagatg acatgagttg 180
 gtcattcaca tggttagtca tgaaatccta cataaacttg tagatcgctg aatatgatat 240
 gtttgaatcc ttgcaatagt ctttccatac aaagatgggtg atattagagt catgctagtg 300
 ggtgggttggtg gattgtagag acacttgtgt tgaagtttgc a 341

<210> 1339
 <211> 455
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-H5

 <400> 1339

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 atgaactcct tcatcaacga catcttcgag aagctcgccg gcgaggccgc caagctggcg 240
 cggtagaaca agaagccaac catcacgtcc cgggagatcc agacctcgt cgcctcgtc 300
 ctccccggcg agctcgccaa gcacgccgtc tccgagggca ccaaggctgt caccaagttc 360
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 ggccgtgtta tctgtgaaga atcgaccgc gatgt 455

<210> 1340
 <211> 411
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-H6
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 cggaagatct tgccactcag gaggagcagt taaatgaatt ggtggacaat caaatggaag 180
 agattgctga ggtcgccaag aacgttgcct cacgcggcaa ggataaattg gctgcttgat 240
 gacgtgagat cttgtagctc gttggtagaa agttagaaaa tttcttactg gagattatcc 300
 tcgacgtgga gaactatgca atgcggattt tttgtttcga gaatgttaca ttgttatact 360
 gtttcaactt agtaaccgta ccaacttatg ttatttgagt gaaaaacaaa t 411

<210> 1341
 <211> 407
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-H8
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 cagttgaggt tgctgtccg gttgcccgc ctacccagtt tcttgagag cccatggact 180

tgatgactgc tctgcagctt gtgatgaaga agtcaagcgc tcatgatggc cttgtcaagg 240
gactccgtga agctgcgaaa gcgattgaga agcatgctgc tcagatctgt gtgcttgctg 300
aggactgcga ccagcctgat tacgtgaagc tggatgaaggc actgtgtgct gagcacaatg 360
ttcacttggt cactgtgcct agtgccaaga ctcttggcga gtgggct 407

<210> 1342
<211> 381
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-B11

<400> 1342

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gcctctctcc gagccttggt caactcatta atgcacaaca tgcaattctc gcgcaacagc 180
gaatccacat ttaacttgat acaatcggtt gggccatacc ctttcggcgt agagaatcat 240
tccgctcagg agaaacttca ttcagggtgc agacagtcag gacattgtcg tcatacgaag 300
tcgatattat accgagtgtc acttaccaaa ccattactct cctgatgtcg cagtgcgaagc 360
acttctctga ttactcacag g 381

<210> 1343
<211> 419
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-B12

<400> 1343

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gctaataaat acgctaggca agaaatggca gagattgact tcagtgaact ccgtctcctt 120
gatgctagac caaatctgcc acaggcgaaa ttttttcctt acgttcctaa cgaggacgac 180
gctcttctag atgacattcc cagcgatgat gatgattttg aagaggagga tgctctgccc 240
atccaaggag aggacttcca aggggaagcc gccgccgccg ctcacaagct tgttcctcct 300
attcagtcca gctgagaaga tgattcagtt ggtctacctc tatctattct atccaattat 360

gttttagcaga tgtctctgtc gtggatccgt acatgtgggt tggtcgggtc tatctatct 419

<210> 1344

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-C11

<400> 1344

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cttgccaagt atgctgggct agtcaagcca ttccgttctg cagcgggtatt atctatactt 180
ctccttgcaa catatccatt catggctaac ctatatgggtg tggagctcaa agtactcatc 240
aacatagcct cgcttcttaa gaatatgttt gcggctacga ttactattgc ctgcaacatt 300
ctgcagaaca cagcgggtggc acaagaacaa aggggtgtcg caaatgggtat atctgtgact 360
ctgatgtcaa tcttcaaagc agtagcccca gcagcagcag gaattatggt ttcattgggct 420
cagaaaaaca taactggatt gttcatac 448

<210> 1345

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-C12

<400> 1345

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gacacctaata ggggtgcatt aaatgcacct tatectgtaa tggctagcga taagcttagc 180
cacgatacac cgatgccacc tctgtgtgac cactgtggca atccccttga ctataaaagg 240
aggccccgagg catccaggag aaggattcgg accctgggac aagttacatt catggtagct 300
agctcaagaa ctcaaagaac actcagatat aactaaagc aggactaggg tggtacgctt 360
ccttccggcc cggacctggg taaacgaccc gtgtgcttgt gctgattgct ggtcctgctc 420
tctcaaacac cccgcgctcc gcaaccat 448

<210> 1346
 <211> 428
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-031-Q1-E1-D11

 <400> 1346

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 ccagctactc tgacgcctcg atttttggga tggtcattaa gataaagatc cgttgagata 180
 tgacagaata aatgaattht aatggaagat gacatcatgg cgggttatca tgaattcaga 240
 agatgacgtc atggcggggtt ataactttgc acagacaaaa gccagaaagt ttttcttaaa 300
 gtattgaaga ttgacatgaa ccggttcaaa tcaatctggg gcctaattgt ggggatataa 360
 ctactggtgt aaccgcacca ggaggggctg ggttacgcta taacaattca ttatatgaag 420
 cccaatat 428

<210> 1347
 <211> 449
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-031-Q1-E1-D12

 <400> 1347

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 ttgcagaaag ggttcggagg gaaaagatta gtgaaaggat gaaatttctt caggaccttg 180
 ttcttggttg tagcaaagtc attggtaaag ccgttatgct ggatgagata atcaattatg 240
 ttcaatcatt acagcggcaa gttgagtttt tgtcgatgaa actttcagct gtcaaccag 300
 cactagactt caacatagag cgcattctat ctaaggattt atttcagtct caaggaactg 360
 catcgtctac ctttggttcc ttaccagaca ttggccatca atttttgcat ccacaaaaac 420
 attctcaagc tgcgttgac agcattgta 449

<210> 1348
 <211> 398
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-E10

<400> 1348

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accatcacgg ctacacacgc ggttgatgta ttttaattaa gtcaagtgtc aagttctcta 180
cagccggaca ttaacaaatt cccatctgcc acataaccgc gggcacggct ctcgaaagtt 240
tataccctgc aggggtgtcc caacttagcc cattataagc tctcatggtc aacgaaggat 300
attccttctc ccgggaagac ccgatcagtt tcggaatccc gggtacaaga catttcgaga 360
atggtaaaac aagtccagca agccaccccc tgtgccga 398
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<210> 1349
 <211> 431
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-031-Q1-E1-E12

<400> 1349

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gaggaggaac ctgccttgca atgccgaaga caaactgcy cgcgggactc atcgtcattg 120
aagcctggtt caggggctac tgaggggggtc ctggattagg gggatatccg acagccggat 180
tatatccttt cgcgggactg ttggactatg aagatacaag attgaagact tcgtcccgtg 240
tccggatagg actctacctg gcgtggaagg taagctaggc aatacggata tgtatatctc 300
ctccttgtaa ccgaccttgt gtaacccttg cccctccg tgtctatata aaccagaggg 360
ttttagtcg tangacaact gtcacacct agttaattca agcattagag tgtgcatcat 420
gtttaaattt c 431
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<210> 1350
 <211> 400
 <212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-031-Q1-E1-F11

<400> 1350

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atctaatacat ttggatatgtt gagcagcaga atgccaaggg tgcataatagt tctacagaag 120
aggtgaagga ggaagtaaag tgcatacaag ccattataga gaggctgata cagagggaag 180
gccatcttgt agtcataagc gaaggaacag cggcagcaga aggtgctgca gcaagggcat 240
cggagcacag aatcctggct gttaaccca actacgtcat tgattgatta accagctgag 300
gacacagcta actagatcca tcatatgtgg ttgaccaata gagcagacat tcanacggaa 360
aacatcctgt tgtcatatgc tctagaaatg atatgttgta 400

<210> 1351

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-F12

<400> 1351

attcccgggc cgacgggtga gaggaaaaga gagaaggac aatgctacta tccttttacc 60
acacttgatg ttcaaaatag caccatgatc ttcatgatag agagtctcca atgttgatcac 120
tttcatatac tagtggaat ttttcattat agaactggc ttgtatatcc caatgatggg 180
cttcctcaa atgccctagg tcttcgtgag caagcaagtt ggatgcacac tcacttagtt 240
tcttttggtg agctttcata tatttataac tctagtgcac ccgttgcatg gcaatcccta 300
ctcactcaca ttgatatac ttaatgggca tatccatagc ccgttgatat gctagattga 360
tgtgagacta tcttctccgc ttttgtcttc tccacaacca ccattctatt ccacatg 417

<210> 1352

<211> 403

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-F9

<400> 1352

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 tcgcccccta ttactgtgca tatggttgtg caaaaggctc gctttgatga tggcacaatc 120
 gattgcacac tttaacaagct catgatttgt tattaccctt gttcctcttt ctatgcggct 180
 gaaaagctag acctggacta gtgtatcatt atttgttttt gtagtaaaat aaaaggcgca 240
 gttgtacggc aaactaaata aatgatgttt attttcgtag tgggtggcac tatttgtgca 300
 gtttgttggc aatgtaaaat gtacacccaa gatatcaa at ggtttgttgc caaaaaaaga 360
 ggagaggagg aaaggggagg agaaaaaaaa agcggccgct cta 403

<210> 1353
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-031-Q1-E1-G10
 <400> 1353

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 gcctcgagg cagcgcatga agcgatttgg gtgaaggagt tcattaccga cctaggagtc 120
 atacccaatg cgtcggggcc gatcaaactc ttctgtgaca aactggagc tattgtcctc 180
 gcgaaggagc ccaggtttca caagaagacc aggcacatca agcatcgttt caactccatc 240
 cgtgaaaatg ttcaagatgg agacatagag atttgcaaag tgcacacgga tctgaatgtc 300
 gcagatccgc tgactaaacc tctctcgct gcaaaacatg atcaacacca gaactctatg 360
 ggtgttcgat tcatcacaat gtaactagat tgggtgactct agtgcaagtg ggagactatt 420
 ggaaatatgt cctagangca ataataaaa 449

<210> 1354
 <211> 451
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E1-G11
 <400> 1354

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tcacacattc tgctacaccg gcaactccat cggctgccac ctccaaccgt gatacaataa 120
 agcaggcaca atcaccacta tctgccaaga tcacaccttc tgggcctgca aagagttggt 180
 cttcatccat ggcatcaaca gggcaaacac atgatattat ttgtcgatgt tgcaaggggtg 240
 gagctcatta tgcgagagaa tgccaatcta agagtgtgat gattattatt gaggatgggtg 300
 ggtatgagtc cgctagtgac tatgatgagg agtctttggc tcttattaca catgaagaac 360
 acggtggaga tgattctgat cctgagacgc aatacatggc tgctgaagat gctgacaggt 420
 atgaatgttt agttgctcaa cttgttttga g 451

<210> 1355
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E1-G12
 <400> 1355

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 tctagcaa acatgaacttta acagaagttc atacattttg atcatcaaaa tgtgatctta 180
 aaacatgtac aatttttttt aaaagcaatt cttgtaaaagc ttaaacttgt ttcaaaattt 240
 tgagaattac taaattcgaa aactgaattt gaattcaatt ttttcctgaa tttaaacatt 300
 gtttgacat tatagaagtg tatcaaacta aagtacacac atattctagt tattttgcta 360
 attttgaaat attccaacac taagaaatgt tcactacgtt cttagaaatg ttcat 415

<210> 1356
 <211> 446
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-031-Q1-E1-H9
 <400> 1356

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 caagggagag tccccccggt cgtcacgccg cagtaataat gacgaatgag ccatcaaactc 120
 acaggcccaa cttttccac tgtgaagttg ctcggacgaa ggaaccatca tgacttcgtt 180

gaattccgct tcttgaagaa aactactgta ccaactgtcc tgctagctac agtagtactg 240
 tactccacca gaggcctcct ttggttcata ggataggaat tttataggaa tatgaaaatc 300
 ataggaagtg agatgacagg catctcaatt cctatagaga aagagatgcc atttgaatca 360
 taggatagga atttttccat tgagtctagg ctaatgtatt ggtaatttgc tctanaaaact 420
 acaatagtaa ctagtactgg tacatg 446

<210> 1357
 <211> 394
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-B8

<400> 1357

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 ggctgcctga tcacctgcac gccgctgcct gcaatattta gtgagcttaa ttaagcaaag 180
 gtttgtgatt tagccacttt cgttgattcg atcttcacta gtgcgtgtgt gtttgcttgt 240
 tactgctgcg gatctgttcc ggctaaataa ggatcgatcg attagtttgt gtaagatcac 300
 catcctatct gtcgtgtcat gtcacacaaa tagccatgta atgccatgta gtagcatgta 360
 atccgcctac aggatttgca tatttgttta cacg 394

<210> 1358
 <211> 238
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-C5

<400> 1358

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 tgagtgtata tatcatggat ggtaaagtgt ccttctcttc attgcatgat tttgaaatcg 120
 cgaaaataaa attaaataaa ataaaaataa ataaacagct gctcaaaagg ataaaagctt 180
 acatatgctt gtatgcaacg tcatacatct tctatagtgt taccaaaatt caattaa 238

<210> 1359
 <211> 314
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-D10

<400> 1359

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 ggggcaccac caagagttcc tccaagataa ataaagaagt ccaggagctt ttaaagctta 120
 cactgagcaa ggcccgagtc aagctgactg agaataccat tttcaatcgg atcgttacgg 180
 actctaattgg ctcatatcca ttcaatggtc tctatgtagg agcgtttagt ccatatggcc 240
 ccgaagttgt acagctccgt cgaaagtttg gccattggaa tagtactgat gacgtggagt 300
 tttcgagtat gtcg 314

<210> 1360
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-G7

<400> 1360

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 ttcacgacta gtcatgtcgg cccgggttct ctgtcatatg gatgctagcg aactatcat 120
 atacgtgagc caaaaggcgc aaacgggtccc gggccatggt aaggcgacac ccgtgggaat 180
 accgtgtgtg aggccacaaa gtgatatgag gtgttaccgg ctagatcgat gtgacttggg 240
 attggggtcg gtgacagctt tggatatcaga gcctgactgc ctgtatgatt 'accaagccaa 300
 actggtcgaa gttgagtcta gaaatgcttt agttatgtaa gggaattgat tatggaaggg 360
 aacgtaaggc tctttttaat ccttatacct catggctttc tgatctgagt caacctc 417

<210> 1361
 <211> 316
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-H4

<400> 1361

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 ccatgggtccg cgcgccgtca cctcgtcctc caggcaccgg agtctccctt tcttccgttc 120
 ttcttttctt gtgattctgg gcagagctct cggcacagct cgtgctgata acgtgttgaa 180
 tgtacatgag aatgaatcga acctctatct ttcattgata atcggtatgg atttatacca 240
 ggctttgcgt cataaaacac atagagagac tctacatgc aaaaagcggc cgctctacag 300
 gatccgagct tacgta 316

<210> 1362
 <211> 385
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-H7
 <400> 1362

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 tatagagttc ttgacgagca caaggccaga gccgacgtgg tcttgcttgc ggctgtgaag 180
 aagaaagctc atcagttgca gtacgaggtg cgctgggttg ccgtctcgca gtactaccac 240
 atctacctgg aaaaaagat gacaaaaact caagcgcaga ggcaacgact taccttgaac 300
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<210> 1363
 <211> 412
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-032-Q1-E1-B1
 <400> 1363

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 tatttgtaaa gagaagttaa agctctcttt gcgtaggcga aagttggaaa cctgacggct 120
 gttacttggt agagactggc tgctgcctag tatgttggtc gacgacagtc gtccagtgtc 180
 gttctgattg ttcccctctg ccacatttga ttgtttccat actcagcaaa ggaagcttgc 240

gcttcagcag cttccgttca gtactgccat tggttagata taattaatgt gtatagggtt 300
 ctttctcggc actgaatcat cttgaatctg tttgattaat atagatcggg attgtgttct 360
 aaagaacagg agcgcggtcg gcgggacaga aaagcggccg ctctagagga tc 412

<210> 1364
 <211> 462
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-032-Q1-E1-C1
 <400> 1364

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 caacacttga gcagttgaat aagaagaaga atgagagaaa gaggaattt gttagtgtac 120
 agtcacaaat tgatcaaata tgtggtgaga ttgctggcac cacagaggtc ggtgagcagg 180
 tggctacacc acaggtcaac gaggatgatt tgacacttga gaggcttgaa gattttcggg 240
 cccaactcca ggagcttgag aaagagaaga gcaatagggt ggagaagggt cttgagtatg 300
 taagcatggt acatgatcta tgtaccgtct tgggcatgga ttttctcagc accgtgactg 360
 aagttcatcc cagtctagat gactccattg ctgataactg caagagcatc agcgacgaga 420
 cattatcaaa acttgacgag acagtaccca caactcatga ac 462

<210> 1365
 <211> 148
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-032-Q1-E1-F2
 <400> 1365

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 ggggtgttgcg gccgtcttg aggatcctgg cttccgtccg cgtgggtgcg atgtcgtagg 120
 ttttctgtac tgtcaccgaa attcaatt 148

<210> 1366
 <211> 100
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-F8

<400> 1366

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tcagatatgt atccgcccac gagacaatgg ccctgataaa 100

<210> 1367

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-F9

<400> 1367

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gtggaatacg tcgtgaactc ctgacaatcc ttcgggcaat tccaacttgt aggctacttc 180
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tccaaagcgc ttaactcttc gaagtgggtga cacacgaaga taaactcggt ctctgacttt 300
gtaaactgtc tccttacgtt tagaatctgt gtagctcttc tgccctggact gggctacttt 360
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<210> 1368

<211> 419

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-A1

<400> 1368

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tattagaata ctctatgtgc ttcacttata tcttttgagc tatatagttt ttgctctagt 180
gcttcactta catcttttag agcacgggtg tggatttggt ttatagaaac tattgttctc 240
tcatgcttca cttatattat tttgagagtc ctacaaaaca gcatggtaat ttgcttaaat 300
cgagaaattg gtcctaaagt aataggcatc caagattagt aaaaatttcc ttatgagtgt 360

gttgaatact atgagaagtt tgatgcttga taattgtttt gagatatgaa gatggtgat 419

<210> 1369

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-A10

<400> 1369

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aggggcatgc gtagtagtac tttgcttcga gggctaataa acttttgcaa taagtatatg 120
agttctttat gactaatgtg agtccatgga ttatacgcac tttcaccttt ccatcattgc 180
tagcctcttc ggtaccgtgc attgcccttt ctcacctoga gaattggcgc aaacttcgcc 240
ggtgcatcca aaccccgatga taggatatgc tctatcacac ataagcctca ttatatcttc 300
ctcaaaacag ccaccatata tacctattat ggcatttcca tagccattcc gagatatatt 360
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<210> 1370

<211> 366

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-A11

<400> 1370

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cggcttgacac tattttccgt gcacaagtag ataatccggg caacgctgtc aacgcggggg 180
atccacgtat cacatcacct cgggtgagcc ggggggttgt catcacttca cttacacaca 240
cccggggggg ttgggttaca ctaacggggt gctccacaat ctccgggggc ggactggggg 300
ttacactttg cccatcgact atgctgtgtc accatttcat caaatcgtgt tctttacggg 360
gacatc 366

<210> 1371

<211> 400

<212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-033-Q1-E1-A4

<400> 1371

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 gtatcttaaa tcacacatac agatctcagt gcttaagggtc ggcttcaatg aaacaaccca 120
 ccatgtactc ctacatggcc tctcatcgat acctttacca aatcgtgttc accacaccac 180
 tctcattacc gacataatca tttcactcta gcccatcacc cagatgaacc agacctgtca 240
 cgactctaag catagcaggc atagcaaggt angaacaaca catacatatg gctcaatcaa 300
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 aaatgggttc aactaccata gcacacagca gtttgaaacg 400

<210> 1372
 <211> 433
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-033-Q1-E1-A6

<400> 1372

ggctctagaat tccccgggtcg acgggtgggtc attcgggtac gccataagga tgcaaagagg 60
 catcctatat cagcaaggac tgggtgttcc accaatagct catctaagag aactctcaag 120
 ttaactgtgc tcaggctgga gcagccatca gatgggtgat tggatgggaa gttttcttaa 180
 tgttaaatta actaatggga tgggtcatag aggtcaaatt aaatgacctc tatgatccat 240
 ctcatcagtt aaataaacct cgaggctcctt gtttttttta acacatgtta aagaaggctc 300
 acttcataac tttttgacaa tgtgcgatac gtcgcatata gttgatccat ccaagttggt 360
 tgtgatggaa taagttgtgt gtatattggg aaaacgcttg ctggtatata accgtttgtc 420
 attgatgaat tca 433

<210> 1373
 <211> 432
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-A7

<400> 1373

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ttgtggcaaa gccacctttc ataattcttt catacatgtc gctcttgatt cattgcatat 180
cccggtagac cgccggaggc attcacatat agtcatat ttgtcctaagt attgagttgt 240
aattcttgag ttgtaaataa atagaagtgt gatgatttcc attattagag cattgtccca 300
tgtgaggaaa ggatgatgga gactatgatt cccccacaag tcgggatgat actccggact 360
ttatgaaaaa taaacgaggc caaagaagcc caaacaataa aagaggccaa agaagcccat 420
catgtcagaa aa 432

<210> 1374

<211> 381

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-A8

<400> 1374

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tcatttgctc tagcgcata cttacatctt tgacaccatg gaggcattgt aaattttagg 180
acatagatga acgcacacga atcacttaaa atattgtgag agtcataaac atcatggtaa 240
tttgatgtaa aaactatcat agtatgtgaa ttgaatgcaa tgatcaattt cacacttgat 300
agttgtgttg agataacgat gtagtggtaa taaagtcatt ctagatgcgt gactacgagt 360
ttaatgaatg cttgtgttga a 381

<210> 1375

<211> 330

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-B10

<400> 1375

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 agcgtcgtag cgggcatttc atgcaacaat ggaggtaaac gtgacagaga tgcagagtgg 180
 attcaatttg tctctcagtt cgttcgtgtt tagccgtgcg acaggataca gacttaagct 240
 ccttcaggc acaattggag agccacgaaa ctgacgacga cgtgcaattc accgtgccat 300
 cggatacacc gacgcaactg ggatcaccc 330

<210> 1376
 <211> 401
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-B12

<400> 1376

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 ccttgttcaa atttgtttat gttctttcag agccattgcc atggttggca ttggcaatgc 180
 tgttggttg gtttggttg gcttggtgaga ggggtaagcg gtgagcgaag ataagggctg 240
 ggctgagctt tcctaattgag aggagagctt cactggagcc caattccggg gcccaaatgg 300
 agcacatttc ctgtgagaaa ttcaccccaa atctgtactg tttttggtat tgccatagtg 360
 gtggatgcc tcttacgttg catatggtga gatgccagct g 401

<210> 1377
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-B2

<400> 1377

tgacgggtcca gaattcacgg gtcgacggga gaagggtcta gggtagctag gggttatgac 60
 gtctcggttg ttttgcaagc tagcatgtga ctccgggatg cctgttttaa gatttcgctt 120
 gtgttgaaag atattattat ttactgcttg tagcctacct gggataccat catattttgc 180
 tgattatgga actactttta aaaaaaaaaa aaaacaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaagaaaa 300
 aaaaaaaaaa aaaaaaaaaa aaaaaagggg gccccccaaa gggttcaaac ctaatttccc 360
 cggttaaggga attttaaacc cctccaaagg ttcccccaaa ttcaa 405

<210> 1378
 <211> 436
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-033-Q1-E1-B5
 <400> 1378

aggtacaggt caagaattcc cgggtcgacg ggtctataca attcaatagt tacaataatt 60
 gttgaattcc aatatgtata cgaggtctat agtacttcac aatatgttca aactcacata 120
 atcccagtca aatgagaatc taaatgcatt tcatagttac tactttgtag gatgcaacaa 180
 aaccaaccat aactctacat catccattat aaaatcaaca ttttgaacac attccaatgt 240
 gtgaatgaag cgtgtagaga gagcttgca agatggagca gatagggcgg gaaagctaca 300
 tgctaaatag ggtttgtgtg tgtgtgtgtg tgtgtgtgcg cgcgcgcgcc agatactgag 360
 agaaatcaaa cctatggaga gaaatgtgtg tgtatgtgac ggaaagctac atgctaaata 420
 gggttttcac gaagag 436

<210> 1379
 <211> 300
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-033-Q1-E1-B6
 <400> 1379

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 catcgggtatt gtttgtaaac atgtaaccca aaattggatt ctactagtgc tgttacacat 120
 ctgagtcaca gaggaggata gttgtgttaa tgcaagagtg gagacgaact gtttcttgc 180
 attaaccgaa aagccatgcg gttcagagtt gtcacaaaaa attaaaaaat ataaaaaaa 240
 caaaaaaaa aaaacataaa aaaatagaac aaataaggaa aaaaaaacta catgcaaaaa 300

<210> 1380

<211> 421
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-B7

 <400> 1380

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tatttgtggtt tttttttgct tatgtttagg aataaatctt gcatctaact tctgtttaga  120
tgtgttttta tgttttaatt agtgtttgtg ccaagtagaa tctatgggat aacctatggt  180
gatagttaat ttgattctgc tgaaaaacag aaactttgca cgcataaagt tagttttggt  240
aaatcacagg aacgtgcttt tgcgttgatt attcttgctt ctgatcaata gacaaatatt  300
ccaggacttc ctattttggt aggattttta aagttccaga agtttgtggt agttacagat  360
tgctacagac tgttctgttt tttatagatt ctgtttttcg tgtgttggtt gcttattttg  420
a                                                                    421
  
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<210> 1381
 <211> 304
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-B8

 <400> 1381

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gagtgtcttg aaaactttct gataattgtg ggatttgctt tgtaatggta atcgtgaaat  120
tggtgtggtt aagaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  180
aaaaaaaaaa aagaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaagcggccg ctctaaagga  240
tcaaagctaa cttacgcgtg aatgcaaggc catacctctt caaaaatgtc accaaaatta  300
aatt                                                                    304
  
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<210> 1382
 <211> 364
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-B9

<400> 1382

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atgggctcca agtcgcaggc caagaccaag gccagggaaa ggctcatcgc caaggaggct 120
gcgagagga tggactaggc ctagccctat aagtattgtc agagcatatg ccatgtagtt 180
tccctttcag tctgtcctga ttttgacgag gaactcgaac ccttttagca gcactgtgga 240
atcgtattgt gggttttctga ttcgctgttc cgttctccag acttctgcaa agatcagatg 300
aggtttacc c atgtttggat tctatatagt tttatgtcct ttgtcgagtc aagaaaataa 360
aaac 364

<210> 1383

<211> 111

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-C11

<400> 1383

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aggccaagac caaggctagg gaaagggtca tcgccaagga ggttcccca a 111

<210> 1384

<211> 379

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-C12

<400> 1384

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gagaagaagg aagaggaaaa gaaggaggaa ccagagccgc cgaaacctga agagaaaaag 120
gagccaacgg tgatctccgt ggtgctgaag gtgcacatgc actgcgaggc ctgcgcccag 180
gcgataaaga agaggatcga aaagatgaaa ggagtgcaat ctgcagaccc agacctgaag 240
gcgtcggaag tgacggtgaa gggcgtgttt gaggagggtca agctggccga gtacgtgcac 300
aagcgcaccg gcaggcatgc ggccattatc aagtccgagc cggtcgcccc ggccgagaaa 360
gccggcgaag gcgacgcca 379

<210> 1385
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-C2

<400> 1385

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 catccccgaa caaggcaaga acacggacaa gccagaaca acaactcccc agcgtctcca 120
 gcgagcagca tttaactcca tccaggcttt cgaggtacaa gaagaaaggc ttctgttcgg 180
 ccatggcttt cccagctcca gctgctgtat tccttgatga gaacctgcca atccatagag 240
 gcaagagggc tgatgggctg aacgcgaggc cactgaaacc atcagcaaag ccatcagcaa 300
 ggaaggccct gcgggatgtg tccaacacca gcaagcccca agcgcctagc attcaaaaag 360
 gccaccctt gaaggacagg tccgtcctga aagacaagtc tgctcttcgc aaccaag 418

<210> 1386
 <211> 392
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-C3

<400> 1386

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 accccatgaa gctgctgcc ctctcacgt tcctgccgca gccaaagggc ttgactccaa 180
 gaggtggtgg tcgaggtgga agaggtggtg gtcgtggtgg atttggtggc cgtgggtggat 240
 tccgtggaag aggtgcacca aggggtcgtg gacctccag ggggtggaggg cgtgggttca 300
 gaggacgagg cagattctag gatgtagttt taagtttgct gtttgttgaa acatgatgct 360
 ctacattata tgttcagctg gaaacattat gc 392

<210> 1387
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-C4

<400> 1387

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gccttcgaca acaagatcga cgccaagcgc acgctgcggg agatcaagct gctccgccac 120
atggaccacg agaatattgt tgcaataagg gatattatac ctctgcaca aaggactgca 180
tttaatgatg tctatattgc atatgaattg atggacaccg acctgcatca aattattcgc 240
tcaaatcaag ctttatcgga ggagcactgc cagtatttcc tttatcagat ccttcgtggc 300
ttgaagtata tacattcagc aaatgttctc caccgagact tgaagcctag caatcttctt 360
ttgaatgcaa actgtgacct aaaaatttgc gattttgggc ttgctcgtac caactcagaa 420
actga 425

<210> 1388

<211> 425

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-C7

<400> 1388

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ctacgaagaa tcagagcctc agaagttgaa gaaaaagtag atagcatcgt gctcaaaaga 180
aaagcaaaag agtagatagc ctctgtcca agtccttcag acgctgggtcg ccaactggca 240
tattcagtac acagactcac gaaatcaaca tacaactcgc aatctaataa atatcttatac 300
agccggcata aacaaccaag cagcatgcac gcaccagga tcgacgggta gcaaggagga 360
tgccatgaga gacttaattg tgaagcttct taattaactg tgcttacttt gaaaatacct 420
ccctt 425

<210> 1389

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-C9

<400> 1389

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aggcctgcgc ctctttcgat ctgtatctca gtttgtgcta gccatcttat ggcaacttgt 180
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ttttagagtt gtgttgtgat atcttcccggt gagtccctga tcctgatcgt acacgtttgc 360
gtgtatgatt agtgtacgat tgaatcgggg gcgtcacagg gggagttgta attgtcttag 420
actcgagacg taaag 435

<210> 1390

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-D1

<400> 1390

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tatctaccat ccatattgca cttgtatcac catcccttcg ccgaactagt gtacctatac 180
aatttactat tgtattggat gtattgggga cacaagagac tctttgttat ttggttgaag 240
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atccacttga gagaaatttg ctactgtcct acaaacctct tcacttggag gccaacaac 360
gtctacatga agaaggttgt gtagtaggca tcaagctctt ttctggcgcc gttgccgggg 420
aagttagtg 429

<210> 1391

<211> 419

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-D10

<400> 1391

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 tttggcctaa ggcgagatgg tattaatcct tttggggagc agagcagcaa ccatagcacc 180
 tggcctgtga ctctatgtat gtataacctt cctccttggg tgtgcatgaa gcgcaagttc 240
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 ctaaggccat tagttgaaga actcttacag ctgtggaatg gaacaggtgt acgtgcgtag 360
 gatgagcaca gacaggaaga atttgacctt aaagcgttgc tgttcgtgac tatcaatga 419

<210> 1392

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-D11

<400> 1392

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 accacagctt gaaagctgaa gcaactacca caacatcaac atccaacctt tttgacattt 180
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 aaattttggc gctgagtaga agcaaggga cggacggagg gtgctcccag tttctcctga 360
 gcctatatgc gtgtattaac tgaaggccgt ggaaggcaaa actcgtgggg agctctctga 420
 gattttggac tgtaa 435

<210> 1393

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-D12

<400> 1393

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taagtacgac aagcacgtgt tctcccacaa tacgacgttc tgctgctca agcagtcgcc 180
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 tcatcaactt ctgctaccga gtaaaactcca agattgggcc gcgagcgtgt cggcaatcca 300
 ggacgcggac ctccgacaag aattctttcg catccagtcg gagtttgcg aaatcatcca 360
 tcaagatgtc cttcgtacct cggggcagtt ctacctcaga aatcaaccgt ccaacagtga 420
 cat 423

<210> 1394
 <211> 396
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-D4

<400> 1394

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 gaagctgtct acaaggatgg gagcaggat gagagtgtga caaaggctgc agttgcagtc 180
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 ttccatgtcg aattcttttag ggagtgcctt gattcggacg aagaagtcag ggaggctgca 300
 tcgtgggGc agggaatgat aaaccaagca gtggttgctt aatatgtgaa atcattttct 360
 gttgttggtt gtggtggaag tttcctcctt gtgcat 396

<210> 1395
 <211> 435
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-D5

<400> 1395

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 catggtgggt caacgcttgg ggaaaagtaa cgagtggctg tgcttgctcg agagaagaga 180
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ccagatcgta cgcgaccggc tcgatgttcg gccggcgcg cgagcgcaaa catttcccat 300
 aaaaaaatgc catccaataa acatattcac gaatttcctt taaacatagt gaaaagagat 360
 gttgaaaatc atttaaacaat tcattttttg acaaatagtt gctttaattg gattattatg 420
 ctgatcaaat gtagt 435

<210> 1396
 <211> 420
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-033-Q1-E1-D7
 <400> 1396

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 gtgaccatcc ggtgcaagga caggccgaaa cttctgttcg aactgtgtg caccttgaca 180
 gacctgcgct atgttgtcta ccatgcaaac attgacgcca gcaataatca agcgtaccag 240
 gaattctatg taagacatgt gaatggatct ccaatgaaca ctgaagctga aagattgaga 300
 gtcattccagt gccttgaaag tgcaattgag cgcagggtat ctgagggtgt gaaacttgag 360
 ctgtgttcaa atgacaaggt cggcctcctg tctgagggtca coctcatctt ccgggagaac 420

<210> 1397
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-033-Q1-E1-D8
 <400> 1397

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 tggcgctgcg caccatggcc gccaaagtga agcataagat ccccgccgct gtccagcggg 180
 ttgcgctctc ttctcgtgct ccggcacctg ctgatgctga cttcgaccgc ttcggcttcg 240
 gcccaaagtt tcgcccggca ctggataaga ttgtagagaa acacatgaag aggcgcaagg 300
 atgaggcctt ggctgtggt gctggcttca gtcttgagc actcacctt ttgcttgggg 360

tccatangct cggtttaacg gagatggctc aatgggtaat gactggaata tctatcctgc 420
accgcatggt 430

<210> 1398
<211> 432
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-D9

<400> 1398

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actatgctat gttggcgaag atcactgtcc accactacca tggaaacaat gttgatttgg 240
gaactgcgtg tggtaaatac ttccgagtct gctgcctgag tatcatcgac cctggcgatt 300
ccgacatcat caacgcaaca ccagctggcc ggtaaacctg tgtatgccat tttcagtgtc 360
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tctgtgtaca tc 432

<210> 1399
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-E10

<400> 1399

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tacaaattaa gtggagctca atatgcaacg agttgcacat tgacggaaca ccacatcaat 180
tatttagttc tctctcggtt atgtacccaa caatattaaa tgttgattaa catggcaaga 240
ggatgaagcat aagtaacta actatcttagg caagtttaaa tgtggccgga acaacaaaca 300
acaattatgg aaaatcctca tgtccatatt atagatttgg tgctgctctg ccctaaacca 360
tatttaaagt tgttaaacag caaaataaag tgcaccatgt taaactagga attttt 416

<210> 1400
 <211> 337
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-E11

<400> 1400

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 tgtcatattg ccttgcatga tcatgtagtt gacatogtat ttgtggcaaa gccacatgc 180
 ataatttatc atacatgtca ctcttgattc attgcccac cgggtacacc gccggaggca 240
 tttagataga gtcataatgtt gttctagtat cgagttgtaa tcattgagtt gtaaataaat 300
 agaagtgtga tgatcatcat taacagagca ttgtccc 337

<210> 1401
 <211> 389
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-E12

<400> 1401

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 cggagcttac aagttttctg ttaagttttg tggtgtgaag ttttcaagtt ttgggtaaag 180
 attcgatgga ctatggaata aggagtggaa agagcctaac cttggggatt gccaaaggac 240
 cccaaggtaa tattcaagta caaccaagag cctaagcttg gggatgcccc ggaagtcac 300
 cctcttttcg tcttcgttca tcggtaactt tacttgagc tatattttta ttcaccacat 360
 gatatgtgtt ttgcttgag cgtcatttt 389

<210> 1402
 <211> 463
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-033-Q1-E1-E4

<400> 1402

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aagctaattct cgtctccgat cgacccgagg ctcgctgaat cctccttccc caccgcctca 120
agatgcagat ctttgtgaag aactcacgg gcaagaccat cacccttgag gtggagtcgt 180
ctgacaccat cgacaacgtc aaggccaaga tccaggacaa ggagggcatt ccccgaggacc 240
agcagcgctt tatcttcgcc ggcaagcagc tggaggacgg ccgcaccctt accgactaca 300
acatccagaa ggagtcact ctccacctgg tgctgcgctt gcgaggcggc atgcagatct 360
tcgtgaagaa cctcacaggc aagnacatca ctctggaagt tgaaaactct gacaccatcg 420
acaacgtcaa ggccaagatt cagacaagg agggcaaccc ccc 463

<210> 1403

<211> 419

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-E6

<400> 1403

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ttccaaagct cgcgggcgga ctctctgggc cattggatta tgtgacttag atcgtctgga 180
tccggaggcc agacataatt cccttgaaat tttccctaa aagcgtcttc tagttcctcc 240
caactcccaa ttgagttttc ggggaggctt ttcaaccagt gtcgagatgg tcccttcaac 300
ttgaggggaa ggtatttgat ggcgtggagg tcatcccccac gagccatgtg aatatgcacg 360
ataaaatcct cgatccagac ccctgggtct gtcgtgccgt cgtatgcctc tatgttcac 419

<210> 1404

<211> 271

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-033-Q1-E1-E8

<400> 1404

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 gacccccggc ctttgcattc gagcgatgca tacggtcact ttattaatta ttctcataag 180
 accttacaaa gtaataccac agtaagacta anaaataaaa gggaaaaaag agaaaataac 240
 caaaataaaa aaaaaaaaaa aagcgccgc t 271

<210> 1405
 <211> 422
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-E9

<400> 1405

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 gaagggcaag aagaagagca agaagagcgt cgagacctac aagatctaca tcttcaaggt 120
 gctcaagcag gtgcaccccg acatcggcat ctctccaag gccatgtcca tcatgaactc 180
 cttcatcaac gacatcttcg agaagctcgc cggggaggcc gccaaagctcg cccgctacaa 240
 caagaagccc accatcacct cccgggagat ccagacctcc gtccgcctcg tctctcccg 300
 ggaactcgcc aagcacgcg tctctgaggg caccaaggcc gtcaccaagt tcacctctc 360
 ttagactgcg tcgcctgtat ctagtagcaa atgtagttct atactgttgg cttaatgctt 420
 gt 422

<210> 1406
 <211> 293
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-F1

<400> 1406

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 attattttctc gaaagggcat ctcataatgc attgagatca atgatcaatt gatataccta 180
 tagtgtgccc ctgcgccgt atatcaatga tcaatgagga agaagtgtcg ccaatcacag 240

ggcgccacat tacgagtcctt actcccacca gtagtatgac tcccatcctt cca 293

<210> 1407

<211> 403

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-F10

<400> 1407

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cttagtatcg tcgaagagta tgtgaggcaa gatagcaaaa atgctcagaa acataatgct 120
gaggtgaacg gtcacgtgca agcacctagt gcattctatga tcacagtagc aaaaatcggt 180
gatggttatc tcaccgaggt tgcaaaggac ccaaataccc ctgttttgaa gttcatcaat 240
cttgctgagg caatttcagg caattcaagg cttttccatg atgggatata tcgcgccatt 300
gacatgtata tgaaggagca cccaagccta agcaagagcg acaagaagaa gctgtgctgc 360
ctcatggact gcaagaagtt gtcgccagaa gcattgcgctc acg 403

<210> 1408

<211> 434

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-033-Q1-E1-F11

<400> 1408

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cgtggtcacc gcgcgaactc ttccctcggg ccagcctacg tccaaaaatc atgtctggca 120
tgttggtcgt ggtggtttta aagtttacca cgctttgggt tggatccagg tgaagtagag 180
gagtttttac atgccaagta agttttctcat cagtaacttt gagaggttac tgagggtcaaa 240
tggctgggag ttgggggctg tgctttggag gttagccatg atctactaag gtgaagatgc 300
acaagaaaat ccaggcacia tggagcaagt aaaatggtag ttgctataga aaccaccatt 360
tctgtccaga acagaaaata tttttctgta gcanaaatat tccanaaagt gatgaaaata 420
tttttaccga ggaa 434

<210> 1409
 <211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-F12

 <400> 1409

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tactgataag gattatgaat tctctgttga tcatgaaatt cttactttag ttgaatctga  180
tcctttttat ggccttgaat ctgaaactgt tgtggcacat cttaccaagc tgaatgatat  240
agccaccctg ttcactaatg atgagaagtc tcgctattat tatattctta agatatttcc  300
gttctcatta aagggtgatg ctaagacttg gtataattct cttgctcctg gttgtgtgcg  360
tagtccacag gatatgattt attacttctc cgctaaatat ttccc                      405
  
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<210> 1410
 <211> 394
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-F4

 <400> 1410

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tgttcacttt tgagagtgat gttgttcact tgcgtatgag aaaaaaaca tccgacaaaa  120
gaaattatgc agctcacttg cctgtctgat gcagtgcagt ttttatttct gaagcagtgc  180
ggtcggccta tgatgttggt catcccgtaa gtgcaaaaaa attgttacgg aaacgaaaaa  240
aaataatgcg gttcacttct tgatagtgtt gtgattcatt tacaccatat gtgaagtgca  300
ctctactttc tcgtccttga aaaaatcacg tttgaataaa agaaaccatg cagttctctt  360
acctgtatga tgcagtgcgg tttttcatcc aatg                      394
  
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<210> 1411
 <211> 385
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-F6

<400> 1411

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gcatacttca cagcttggtg tcttatgagg tgctgcatgg cagcatgctg gtttatgccg 180
cctcggatcat tattatcatt tgtaacttgt tagagtgcac attaacttca tgaggatata 240
cacataatac ttatgctgct gttgttggtta cgacctttat gccattgcct tgtgttgcta 300
atcatcaata atccttgtaa gcttgatcat ggggtggggt gctagctggg gtacatttga 360
gattatcact tctgcatatt gtttt 385

<210> 1412

<211> 443

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-F8

<400> 1412

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ttctcctgat ccgccaaggc cagagggtta tccttcggcc tcccgaagtc cgaagtattc 180
ggctcctaaa gggagcagca gaaaaagtct ggagctgtcc ggtgcgcgac cggacgtatt 240
gatgagtctt ctggagcaag cggctatctc agaagcgcat cgtacgctaa tgggtatggg 300
ggttgagagg atttcatccg ccgaaagcgg gttgcatgaa gcttttatga gcctgctgag 360
aggctttgag gtacgcaaag taatatatat tttttgacag taccgcacat gctaggtgtg 420
ccctatgcag atagtagccc ctg 443

<210> 1413

<211> 388

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-G1

<400> 1413

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 caaccagctt gctgaggcag atgagtttga cgacaagatg aaggagctgg agggcctctg 120
 caaccccata atcgccaaga tgtaccaggg tgccggagct aacatggcgg gtggcatgga 180
 cgaggacgat gcacctccgg ctgctggcgg cgctggcccc aagatcgagg aggtcgacta 240
 agcgagcact tgtaccagtc ttaccctaaa gttattccgt tcgttatgtt ggatgctact 300
 gcagtacgtg gtgttggatg tgatgtgtgt gaactgcgtt tgctgctgct tttctgttaa 360
 tgtagttgc atctggtgat atgctgct 388

<210> 1414

<211> 386

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-G11

<400> 1414

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 gtgaacccaa cgagcttata tcaatacagg gacatccaga gaaagattgt tgagtttata 180
 agaaagagat accatattct ggaaaaatgc ttggaccttg aatatgccgt gataaaaaca 240
 aatactcctg ttctgatga tcttactgaa caaaatattc ctatgggaca tagcccagct 300
 gttccagata tcagtgaagt gttgagagaa cttccccctc ttgtaccaat ttctgccaaa 360
 gaagtggctt ctgatggctc aactga 386

<210> 1415

<211> 351

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-G12

<400> 1415

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 ttgttagtga cattaggtgt tacagccttc agggtagatt ccgtgtagaa caacagccat 180

gggtgacaaa gaacttgatc agcagttatt ctagaagaga catctcgatc taacattcga 240
 cttataagat atcgccaag aactgacatt gattcccatg gagcgctgtt gaaatcaagc 300
 tcaactgtct ttatagcttc aaagacagct tccagagagc ccccttgaaa t 351

<210> 1416
 <211> 416
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
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 <400> 1416

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 ctgaggtgta aaatctgaac tgttcgaaa cttgtgcaac ctgagctggc tagagctgtg 180
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 tattaagcag tggaaaaatt taagtgtctt tcaactctct gagagtangc ttgtgggatt 360
 aatacctttg ggaattggca agatgactaa tctacgggtca ttgattctaa acaaca 416

<210> 1417
 <211> 385
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-033-Q1-E1-G3
 <400> 1417

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 gcaaggcact tccgcaagt gttctctgaa ttagtgcaag gtggtcacgg atacttggtt 180
 atgatgaaga aaaaggatgg tgatgctggc gatgatgaca tggatgagga cgtgcctcgt 240
 gaagcagatc ctgaaggag gatagagaag tatattgggtg tgaaagtcaa ggtttccttc 300
 actggcaagg gagaaactca gtccatgaag cagttgtctg gaggacagaa gacagtgggtg 360
 gcattaacac tgatctttgc tatcc 385

<210> 1418
 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-G5

<400> 1418

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 ccagtcacac tggaactgat aggaattctg ttcattgaagg tttgtctcat ttgaagaaac 240
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 accatgtttg cactgttgaa gaattgtcag tcaaactggg tgactgggtac tacatggatg 360
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 gcacta 426

<210> 1419
 <211> 406
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-G6

<400> 1419

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 tgctccttct tttattttcg ttccttcccg aggcattggc gaatttcctt ttttttatct 180
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<210> 1420
 <211> 433

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-G7

 <400> 1420

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 tttaacacaa gtatatctca aattcacaac tactcaacta gcatgactct aatatcacca 240
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 aagaaagttt ttactaatct tgaataccta gcatattagg attatttaag aaaattacca 360
 tgctatttaa gactctcaaa ataatctaag tgaagcatga gagatcaata gtttctataa 420
 aacaaatcca aca 433

<210> 1421
 <211> 425
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-G8

 <400> 1421

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 tgaggccccg atgaagggtg ggttttatgt cagtcctgag gccaagctgc tgtttgttgt 180
 cagaatcaga ggtatcaatg ccatgcaccc aaagaccaag aagatcttgc agctgttgcg 240
 tttgaggcag atattcaatg gagcgttcct gaaggttaac aaggccacca tcaacatgct 300
 ccgcagggtc gagccatatg ttgcatatgg gtacccgaac ctgaagagtg tgaggaggtt 360
 gatctacaag agaggttatg gcaagctcaa caagcaaagg attcctctga ccaacaacaa 420
 ggtca 425

<210> 1422
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-G9

<400> 1422

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ggataaacta gaggggacgg ggttgccggc acacggcttg gtgtttcttg atgtatcttt 180
ggtgctagca cctacccttc tatttatatg ttgagccttg gggtcgaaac ttggtgtaaa 240
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acgctagggt tcccgcagtc tagaccaga cgccaggac cctggcgtct ggccccttgg 360
actcgcaaaa acttcctttt gcgctttcaa aaaaccttgt gggctttccc ctttggccc 419

<210> 1423

<211> 374

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-H11

<400> 1423

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atgagagcat cctcaagtgg atcgcgcaaa tctttggctg ccctgtcttc acagttgaga 180
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acactgtgct catg 374

<210> 1424

<211> 376

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-H3

<400> 1424

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ttgacattca ccacagggaac aagagatttg ctggtttcaa acaagatgat aaatcgagg 240
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tctcagctga tgacat 376

<210> 1425
<211> 413
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-033-Q1-E1-H5
<400> 1425

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aagtttcggt agatccctgt agtgtattga ttgtttgaat ggtacagggtg atagggtgatt 180
agttgtttca tctatgcaaa tgatttctgc tagtaatccg aataggggtta gtgttcgtgc 240
taataattcc tagccaagac ttgacaattg attttgaatg acctacctat gtttgtgcca 300
ttattttatt caagattgggt ctgtacatag atgattgtgc ttaaaatcaa accataatct 360
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<210> 1426
<211> 423
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-033-Q1-E1-H6
<400> 1426

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ttcattgttt atttttgatg aaagctattg tctccattgt tactccttga ctttgtcaat 180
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tettgagggg ccagagcggg gagagcgggc tccggaagcg gtccggactc cagcagggcc 300
cacctcacat tatcaccata tatttcttgg agtccgtgca cggcggggcga gcgatctctt 360
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cga 423

<210> 1427
<211> 432
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-033-Q1-E1-H7
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ctttcaaatt ggtcattggt ggctcccttc cttgctcaat atttggggag aggaccaggg 180
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ctcacctcag gaggttggtc ttccccttgt aatgtcatcc atagcccaag aggcaatcca 360
ccaccaccac actcactaca aaaagaagac acttccgtga tgatacgtgt ttgtcacagt 420
aggatcatgtt tt 432

<210> 1428
<211> 391
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-033-Q1-E1-H8
<400> 1428

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ttcgatatca gttgttccca gtaccactgg tggccggggt tactactatt ttccattttc 180
tgctctttct gaccagcca aactcttcaa cgatctcaga tggagtatca ccagacccca 240
ggggtttgag gctgtcatgc gtgtcagggt cagtcagggg cttcaagttc aagactattc 300

tggcaatttc tgcaagcgcg tccctactga tattgatttg cctgtgattg actctgacaa 360
aaccataatg gtttccctta agcatgatga t 391

<210> 1429
<211> 394
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-H9

<400> 1429

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ttatgctcga tgagaacagg acaggtgaat cttctcatag gggattttat ctttataatg 180
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tggcagctga tgaaattaac agacaaggac attgtagaga tggatcatctt tcccgtggtg 300
aatgaggcct gccgagtgcg ggatgagggg attgcactga aagcatctga ccttgatgta 360
gcatccatta tgggaatggg cttcccttca ttta 394

<210> 1430
<211> 431
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-A12

<400> 1430

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gaatttcaaa aatgaggaaa aactcaaatt gaagattttc aacttttggt ggtggcgtga 120
cccaccgtat aagaatgatg atttcagaca ccgcgtacaa ttttcgtagg gctctgagaa 180
tcaagttatt cgtaatttc ttcacactta gagggttaat ctttactgat tgaagaaaaa 240
cgttacgtgt gttgcacatc aaggtcataa attttgcata agtggttagga tgtgtgtcct 300
tttcaaagga cattcgaaga ttataggata ttagctcaca ccgcaacttg ctaaactctct 360
tctcatccaa gggctttgtg aagatatcat ctagctgggc ttcagtcttc acatgctcaa 420
tagatatgtt g 431

<210> 1431
 <211> 398
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-B11
 <400> 1431

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 cataaatatc atgaatgcta tgttgatttt gtttcaacta catgtgtgaa catgcgccaa 180
 gtcaagtcac ttaaattcatt cagaggagga taccacccta tcataccaca tcacaacat 240
 tttcatagca tgttggcaca caaggtaaac cattataagc tcctagctaa tcaagcatgg 300
 cacaagaaac tatgatctct agttgtcatt gcaaacatgt ttattcataa taggctgaat 360
 caggaacgat gaactaatca tatttacaaa aacaaaag 398

<210> 1432
 <211> 404
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-B2
 <400> 1432

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 taaactactc ctcgtcgttg tccgcggcct gcacatagca gtaggcacct ccagtgtagt 180
 atgagtcac atcgacagtg gcgtctggct cctgggctcc aacatctggt cgtaacaacc 240
 atgtatataa aggggaaaaa agggggagaa aagcaaccgt gagtactcat ccaaagcact 300
 cgcatgcaag gaactacact acatatgcat aggtatcaat gaaaggggtg gtatatgtgg 360
 actgaattgc agaatgccag aataacatgg ggatagcttg tcct 404

<210> 1433
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-B7

<400> 1433

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gtattgaaac gatatgcctt ctgcttgctt acaagattaa gtacccggag aacttctttc 180
tccttagggg aaaccatgaa tgtgcctcta tcaacagaat ctatggattc tttgatgaat 240
gcaagaggag gttcaatggt cgtctctgga aggtttttac tgactgtttt aactgccttc 300
ctgtggctgc acttattgat gacaagatcc tgtgcatgca tgggggttta tcacctgatt 360
taaagaacat ggaccagata cgtaacattg cccgtcctgt ggatattccg gaccatggtc 420
tcccctgtga tctgctatgg tc 442

<210> 1434

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-B8

<400> 1434

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atttaccgtt gtgttgctcg ggctcttttc cttgttttga cgtttgtttt tattacgccg 180
tggtctcccg ttgccatccc ttatttcgga tgtgctggga tcgctggtgc ctttacgggc 240
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ccttggtctt tcttgccga ggtgtctggc aagccactcg tcgggatgct atgtttgaat 360
gccgctaagg cttcggcatc cggacaatcg acaatttgat tcttcttagt gaggaatctg 420
ttccaaa 427

<210> 1435

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-B9

<400> 1435

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agtgctagtt atcgactaga ggggggtgaa taggcgattt ttatgaaagt attcaaaaca 180
tggaagtttt gaagacaaac gatagaaatg aacctattaa catgcagcga aaggtagact 240
acactaagca agccatagtc aagtatacaa tgaagtgaac gcacgaagac taatagcagc 300
taggcagtat ggatcaggat ggaagatagt atgaagccaa ttagaacaaa cagtcacaca 360
gtgaagacaa acaagtaatg caagtaggca atgacttcac aaggaccaac tattgattaa 420
gaagaaggaa agg 433

<210> 1436

<211> 430

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-C10

<400> 1436

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gcaaagtttc tgttttttac agcaagatca cattgacttt ctccaagta ttcccaaagg 120
tcttacttgg cactttattg aaacaaaagc tataaaacat gattaatata gtagcataat 180
catgtaaaca cacaaaaaca gtaagggtaa atattgggtt gtctcccaac aagcgctttt 240
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tgaagcacia agagagcatc ttgaagaata tgactagcac acttaaatat aacctacttc 360
ctatgcctag ggattttggt agcacacaat ttatgggaac aagaatcaac tagcatagga 420
aggcaaaaca 430

<210> 1437

<211> 61

<212> DNA

<213> Triticum aestivum

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<400> 1437

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a 61

<210> 1438
<211> 423
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-C6

<400> 1438

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tatagttttt gctctagtag ttcacttata gagcacgggtg gtaactattg ttctctcatg 120
cttcacttag attattttga gaatcctaca aaacagcatg gtagtttgcc ttaacaataa 180
taggcattca agattagaaa aaggaaaaat tcttatgagt gtggtgaatg ctatgagaag 240
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agtagttgtg aatttgagaa atacttgtgt taaagtttgt gattcccgtg gcatgcacgt 360
atggtgaacc gttatgtgat gaagtcagag catgatttat ttattgattg tcttccttat 420
gag 423

<210> 1439
<211> 398
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-C7

<400> 1439

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tgcataacta ttcaactact cattgatctt cacttatatc ttttggagta gtttgtcatt 180
tgctctagtg cttcacttat atccttttag agcacgacag tggttttatt ttatagaaat 240
tattgatctc tagttcttca cttatattat tttcagagtc tttagaacag aatggtaatt 300
tgctttggtt atgaaattag tcctaatatg atgggcatcc aagagggata taataaaaac 360
tttcatataa agtgcattga atactatgag aagtttga 398

<210> 1440
 <211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-C9

<400> 1440

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cttaagttat atttgttaga gcatgggcat atcttttgta gaaagaatta aactctcttg 300
cttcacttat atccatttag agagatgaca ggaactgggc attcacatgg ttaatcataa 360
aatcctacat aaaacttgta gatcacagaa tatgatatgt ttgattcctt gcaatagttt 420
tgc 423
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<210> 1441
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-D10

<400> 1441

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tcgcagtagt tctcctagtg ctaccttagc caatatagcg gaacgtaagg caccaaaaca 180
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ggtactggag cccctggcgt atttgccgta ccatagtgtg cgggtgtagc atgttattaa 360
tgaacatata tatgaaaaga gattaatgca aaagatagac aaaaagctat gcattgttta 420
taaaa 425
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<210> 1442
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-D6

<400> 1442

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 cttgcttatt cattggggct tctaaactag ttatgaaata gctaatttag aagtctcaac 180
 aaatctagag ggcaacttat attttaagcc ggagagaggc atcttatttt gtaagccact 240
 caaaagaact agccctacaa ataagataca cacatttaca cacacacata tgctaaatgt 300
 cacttgctcg aagatgaatt tggcactact tgattatgcg tagagcatcg acaacgcgac 360
 ccgtcatggt gtcccatcgg agatgtgcct ggaacgagtc agagccaggc gagacat 417

<210> 1443
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 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-D8

<400> 1443

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 aattgataga tttgagcata gttatgagaa tatctaggta tgatcatgta tataggcatc 180
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 ctcgatggca acaatacaat acgtgtcggt tcccctactg tcaactgggat cgagcacccg 420
 aag 423

<210> 1444
 <211> 429
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-D9

<400> 1444

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aactttttcg acgtcatctc tcggaagtcg gttggcgtga ggcaactcag aaggctacag 180
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atgtcacgtc cagaggggaag catagccagg ggcttttctga ccgaagagtg catctcctac 420
tgcataaat 429

<210> 1445

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-E10

<400> 1445

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ccaaaggaga ccctgccaga gttcctgccg ggctcccat ggacgcagga agtggtttgtg 180
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<210> 1446

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-E11

<400> 1446

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cga 423

<210> 1447
<211> 423
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-034-Q1-E1-E5
<400> 1447

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aac 423

<210> 1448
<211> 432
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-034-Q1-E1-E6
<400> 1448

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 cgctctagag ga 432

<210> 1449
 <211> 411
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-E7

<400> 1449

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<210> 1450
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-E8

<400> 1450

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<210> 1451
<211> 417
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-034-Q1-E1-E9
<400> 1451

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gacacgagaa aaaaaattga aagcaataag aggcaatgga tatcatttcg tccacaaagg 180
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aaaccaggca tctcaatgtt ttgccggcaa tcaacggtgt cccggtgttt gaaattc 417

<210> 1452
<211> 415
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-034-Q1-E1-F10
<400> 1452

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agtctgatga aagccctgct tctacacctg ccgaaagtaa cgactcgact gctgaaattc 180
ttttcaatcc aaatgtattt acggagtaca agcttgctgg cagtctgag gagattgaag 240
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ttgttcagga tctttgctct cttgatgtct cccctatgga tgggtcaaact ttaactgatg 360

tgctgcatag caatgggata aatgttaggt atctgggcaa agttgcaggc atgat 415

<210> 1453
 <211> 441
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-F11

<400> 1453

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 ccggcgatgt cctgcgcatg aaggagacaa agattccagt tatagctgaa agctttaaga 180
 aagctattct gaaggaacat aaagctgcta gcgaagctac ttatggggta tcaacggtat 240
 tgtcttccgc aagtgtact tgtaggtcgc gcagcgaagg tctccttagc ttactcaatg 300
 aagagagctc ctacaatatc ttgaagtttg aaattggctc gtgtgtcttc atagattcat 360
 tggggagcag ccataatatt gagttggata cttttgaacc accaaaagcc gacctgctat 420
 tgccattctc tgccaagctt a 441

<210> 1454
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-F12

<400> 1454

attcccgggc cgacgggtta acttaaaggg gttaaagcga acaaaggacg cagagagttt 60
 tatactggtt cgccccttg cagtgaaggt aaaggcctaa tccagtcggt gtggaattgc 120
 tagggtttcg atgaccaggg agcgaaccct ctatgcctgg ctctcgagtt gttgtttctt 180
 gtcctaaac cgccgcggtt ggtcccttta tatccacagg ttgacgcccg gtgggtttaca 240
 gaatcccag ggcggctcat aaatgtgtcc ggctcggttt ctaccttct tatcttacia 300
 cacaagttac atatgatgtg gtgggttatg tctacaggcc ataaccgcc tctgggcoct 360
 gggccttcgt aaagcgccac actccttgct ttcattgggt tcaaatatga ataactca 418

<210> 1455
 <211> 392
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-F5

<400> 1455

aattcccggg tcgacgggga actgcaaact atgcagtcgt ctctctgcaa aaacataaaa 60
 taggaaaaca tgactaaca tgtgatcaac acgacttaca tcataactac ctacatatgc 120
 atcattatca acatcggggg tgggtggagtt tgactgcata atgccagctt ctactcagtg 180
 gccatcctaa ctactactgc aagtaactct tttgacgtgg cacacaccat tccacatatt 240
 caccatatca atacatcact atggaacctg ctcccgctct cctattacaa agccatccat 300
 agcactcaca cttatcttgc gacttttaca gttcccactt tcacttgtct atgaactgtt 360
 atatgcaacg cacaagtcct ttaccgtgga ca 392

<210> 1456
 <211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-F6

<400> 1456

aattcgcggg tcgacgggat cgatcatctt ggctctctcc cggcctctctc tttctcgtcc 60
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 actgatgtta ccatggcgtg agcactgcat ttcttctcct ctctccactg tctttgtgca 180
 agcactccaa ctagttcgcc gacagggctg ctgcgccatg acttcgtgct cgtcatgtcg 240
 gacacggcgc cagcatcact atccaccgca gtcgccatgg tccggtgcac aatgcatttc 300
 ttctccctt tctctgcta gctcttaacc atgtgtgcta agtgcaagtg ctagctctta 360
 atcatacccc atgcgggcaa ccaaacaacg tgtagttgca gtggcgaacg caggaataat 420
 ttc 423

<210> 1457
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-F8

<400> 1457

taccgatcca gaattcccgg gtcgacgggc aaatgacagg aagtcactac aacgagctct 60
ggataataag atatatcttc tctgtatgg caaaactttt ggggctcctg atggcaaacc 120
tgtttggcat ttcccagaaa aagtgtacga aaatgaagac tctttgcgtt tgtgtgccga 180
gtcagcccta aaatctgttc tcggcggact tgacaatata tattttgttg gcaacgctcc 240
aatggctcac atggtaactg aacaaaaaga ggattccagt gtttcgcat tcaagcggtt 300
cttcttcaag tcgcaagtga tcggcaccac gcatttggac atcaggaggt gcgaagacca 360
cgcgtaggtg accaaagctg agttgctgga atattttccg gagcacaagg atc 413

<210> 1458

<211> 303

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-G1

<400> 1458

agtgagtcgt attaaaaggc tcaccatgtc gcagaagctc accctcgctt actccgcgt 60
catcatagct ggtggcataa tgggttacat gaagagcggg agccatatgt cattggctgc 120
aggaggcata gcaaccctgg tgctgttctt cgttcacact caacgtacca gtgagacgcg 180
tctttgcgtc atcgatcggg ttatgtatat ctgctgcact gctgtcagtc atgggggtctc 240
gcttcaggaa gtccggaaat atattccgca gccggcgtca tgtcccgcct tgccgtgggtg 300
atg 303

<210> 1459

<211> 409

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-G10

<400> 1459

gggtcgacgg gtgaagaaga cgcattctgt caaggctgct ggccccggcg gacaaaggcg 60
ggagcggctg ctgcgcgaga accgacgtga gctgtgtgcg gtggtgtcat aaggagcctg 120

tcgatctcca ctagagttat cccaagtttc acttcacatc gtgatgttgt tttacctttt 180
 tttcatgtcg tcgtcccgct gcctgctata acggacagcg ctccctgttg gcgcgcgcgc 240
 cggcgggggt ggtgccctgg cggcggatgg tgtatgtcct ctgccgccgg gtgctcccct 300
 gcttgtagct agatgggttg ttactctttc cgtccattgt caccggctaa gattgtgata 360
 atatcaatct gggaatgtc aaaagtgtcg tttcccacgg aaataaaaaa 409

<210> 1460
 <211> 411
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-034-Q1-E1-G3

<400> 1460
 gggtcgaccg gtaagatgga ggtgttgtcc gaacagtggg tgctcggctg cgaccatatg 60
 accttttcct attgtattat cagctgtgtg acgagaggat agaccgacca atctgaagct 120
 gctactccct tttgtcccta agcagaacaa gttggcatgg agcagtctgt tctaaaagta 180
 atgtatccat atgttactgc caatcaggat agggacatga gttttaactt cctctgggtg 240
 tgaggagata ataaagaagc tgagagatcg actgtttgag aagcgggttc aggagatcaa 300
 agccaacaac aacctaggct ttgaaaaaga tgtttacaat gaaaaactga ggaagttgtg 360
 atggactgaa agatttgctt gaagcanagg catccacctg ngatatatat g 411

<210> 1461
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-G5

<400> 1461
 attcccgggt cgacgggagg aggaaaagat gggggagggg ctctccatgt cgcagaagct 60
 caccctcgcc tacgccgcgc tcgtcggagc tgggtggcgta atgggttaca tgaagagcgg 120
 aagccagaag tcattggctg caggaggcat atcagccctg gtgctgttct tcgttcacac 180
 tcaactacca gtgagaccgc tctttgcgtc agcgatcggg ttaggtatat cggctgcact 240

gctgtcagtc atgggggtctc gcttcaagaa gtccggaaag atattcccag ccggcgctgt 300
 gtccctcctt tccttggtca tggtcggagg ctacgcccat gggattatgc gtagctcgca 360
 tgcgtgatgc agtcagtgcg gttaccatat gcacctccgg acttagactt gcgagttcct 420
 tttccttttt 430

<210> 1462
 <211> 420
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-G6
 <400> 1462

aattcgcggg tcgacgggca gatagagctg ctgaaacaga agctcaagat gatatgcctc 60
 ggcgaggcct tcaacgggaa gataccaag acggcacgat cccatggcaa gaagttccag 120
 gtctcgatcc agcaggagat gtcacgcatt ctgggtaacc ttggctgggc ttacatgcag 180
 cagaacaact atgaagccgc tgaattggtt tatcgaaagg cccagactat cgtacctgat 240
 gccaacaggg cgtgcaacct cgggctgtgc ctgattaagc agggcagaca tgaggaggca 300
 gtgcaagtac tcgaggacgt cctacttcgc agaattctcag gggttgatga cgacaaggcg 360
 gttgcccag ccgagcagct cctccgtgag ctcggtccga caacacatgt ttcacgccc 420

<210> 1463
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-G7
 <400> 1463

taccgatcca gaattcgcgg gtgcacgggc gacggtagag gcgcccacat caacctcaag 60
 gtcaaggggc aggatggcaa tgaggttttc ttccgcatca agagatccac acagctgaag 120
 aagctgatga acgcttactg cgaccgtcag tctgtggatc tcaactccat tgctttcctt 180
 tttgatggtc gtaggctccg tggtagcag acccctgatg agcttgagat ggaggaaggc 240
 gacgagatcg acgcatgct tcaccagacc ggagggtgct ttctggccc ttagaaggag 300
 cttgctgcag cctggctggt ctatgtcgta tgctaccttt agaactagag taaaatgtaa 360

gaagtgaaag aacttgtgag gctatggttc tgtgccatag cctgatgggg ggtctggagg 420
tg 422

<210> 1464
<211> 453
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-034-Q1-E1-G8

<400> 1464

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ggaaaaacgg tactctaact gatttggtta acgtcatgtt agatacatcg ggtttatcca 120
aggcatggtg gggggaggct ataatgacat catgtcatgt cctgaataaa gttccgacaa 180
aggataacga gatcactcct tatgagaagt ggaccaagag aaggacaaca ctctcgact 240
tacgtacttg ggggtctgctt ggcgaaagt aatgtgccga tccccaaaaa gcgtaagctt 300
ggaccaaaga ccgtggactg tgttaatttg ggctacgcta tgaatagtgt tggctataga 360
tttctagtag tgaaatctga ggtacctgac atgaaggctc gtacaattat ggagtctaag 420
gatgctacat tctttgaagg acatttcccc atg 453

<210> 1465
<211> 385
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-G9

<400> 1465

aattcgcggt tcgacgggga agggcaaccg cgcgctgcgc gacgcagcaa tgatgggtgg 60
ccgccatgtc ctgcagtgtt tcttcagatc tgaattatga acggggtgag aaagaagaaa 120
gcgaactgga tggacgagga tctacgggt cgtgggtggc taatcgggcg gctaggggtc 180
gaccggccga aattttgggc cggcgcaccg gcgccgatca gtcgcctttt ttctggctga 240
tgtatgcatg cttttatagt ttgagcgatg gtggttcact ttttaagctaa cttgggtgat 300
tcgttaccba aaattgtacc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa ataaaaaaaa 360
aaaacaaaaa aataaaaaat gaaaa 385

<210> 1466
 <211> 450
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-034-Q1-E1-H5

 <400> 1466

taccgatcca gaattcccggt gtcgacggga gattaatatg atggaaaata gacccggggg 60
 ccataggttt cactagtggc ttctctcaag atagcataag tattacgggtg ggtgaacaaa 120
 ttactgttga gcaattgata gaaacgtgca tagttatgag aatatctagg catgatcatg 180
 tatataggca tcacgtccgc gacaagtaga ctgaaacgat tctgcatcta ctactattac 240
 tccacacatc gaccgctatc cagcatgcat ctagagtatt aagttcataa caacagagta 300
 acgcattagg caagatgaca agatgtagag ggataatctc aagcaatatg atataaaccc 360
 catcttttta tcctcgatgg caacaataca atacgtgtcg tttcctcttc tgtcactggg 420
 atcgagaaat ttaacttggtg tttgaataaa 450

<210> 1467
 <211> 393
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-034-Q1-E1-H7

 <400> 1467

attccgggtc gacaggacaa aatagacgggt gcaagcatcc gtactatgat gcgatgcacg 60
 cgatacgggt tcaactgtgtc ggtggaaaca tcaaacttag ctgaatttct tttcaccttc 120
 gtcagttata tactcactag ctgaactctg tcccacagcg caactgttgt acgtgcatac 180
 ataggatgta tggcttgtca taactaatta tgacttcata tgttgcctaa aaaaaaaaaa 240
 aaaaaacaaa aaaaaagcgg ccgctctaaa ggatcaaacc gtagctctac atgatataaa 300
 cttacgtact cttccatgcg agtctcatag ctcttactac actgtcacct aatttcaatt 360
 catcggcagt cgtataacac tgcgtgact ggg 393

<210> 1468
 <211> 420

<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-A3

<400> 1468

cgggtcgacg gggcaccaca cagcaatcat gtcattggagg aggtgggttg gagcagtga 60
tgagtggggc aaggagtga cagtaacagg gcaggtatct ttctgtgcaa gggaccactg 120
ttggcatgat ttatcaacag tctgcaatca agcaaagcaa aacgtgggta ctgggtcaat 180
ctaaaccatg ggagtgttcc agaagaagca caagacactg tgaataaatt tattataata 240
attgatcatg accactaatg accaacctta gcattctgga acaagaaaag gacataatac 300
agcttacata aaacctacac ccatgacgac atccgatgaa tgtaagcaca gcatgtcagt 360
ttcactttca acttatccgt gggacatagt atttccttgg cagaaaatgg gaaaaaagat 420

<210> 1469
<211> 365
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-A6

<400> 1469

gggtccagaat tcccgggtcg acgggatgac gaaggtcatc ccctacgcgt ttgtcatagg 60
ctctatacgg tatgccatgc caactaccgc acctgatgtg tgccttgcca catgtctggc 120
aagaggggtac atgggtgatc caggagtggg tcaccagata ccagtcaaaa ttgaccctgg 180
agtaataacg acatgtttct cgattatgga ggtgataaaa agttcggcgt aaaggggtac 240
atcgatgcaa gctttaacac ctatccgact gactctaagt ggcataccgg atatgtataa 300
tggagcaact agttggaata gctccaagtg gagcgtggaa gcagcattta taatatgcca 360
aagca 365

<210> 1470
<211> 404
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-A8

<400> 1470

ggtccagaat tcccgggtcg acgggtatgt gtattgcttg gagcgctcgtg tattatatta 60
 gtctttgctt tttagtttac cacaatcatc cttgatgtac acaccctttg ggagaagcct 120
 atttgattag aatttgctag aatactctat gtgcttcact tatatatttt gagcttgata 180
 gtttttgctc tagtgettca cttatatctt ttagagcacg gtgggtgtctt aattttgaag 240
 aaattgctag tctctcatgc ttcagttata ttattttgag agtcttttag aacagcatgg 300
 tattttctat tadcataaag ttggctcctag aatgatgagc atccaagttg agtataataa 360
 aaactatcat acgaagtga ttggatgata tgatcaactt gata 404

<210> 1471
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-B1
 <400> 1471

ggtcaagaat tcccgggtcg acgggattcg aaatttcggg aagcgcgcg gacggagagg 60
 accgcagtaa acggagcgga ttaggcagg ggcctcgat tcttgcgcca cttttttcac 120
 cacgtaccga gcgcgcgact gttgcgggat ttgacgggat tgccttggcc cacaagtcag 180
 tcactcggcg aataggccta tataaggcgt ctgggccggt gttttttgca cagtgagtc 240
 cattttcttt ctctctctct acttctccac tgcattccgc tccactctcg gcgccatcgc 300
 ccagcctgag cgcaaccgcg tgcgatggcg aaggacaaga cggcggtctt ggagcgtgcg 360
 aagaaggcga ccgcgaaggc gaagggcaag aaaacgagcc ggggagggtc gtcgtccag 419

<210> 1472
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-035-Q1-E1-B2
 <400> 1472

taccgctcca gaattcncag gtcgacggga tgcattacaa cgacatggtc tatgatgctg 60
 tcatgcatat catgctcaat gcattagtga ttgagtcgca acaaaggatc tgactagtcg 120

taggggttct tgaagcaggt gtgctcccaa cccctcttct tttggttcgt tacagtacat 180
 gggtaattag aatgtgttgt gagataggaa ggttcttttg attgcttcgg cattttgggt 240
 acgtgccaga aatcgccatc agattgctca accttagagt gtaatatagg gacatcttag 300
 aaccacacag tttttggctg aatggtaaac ggagatgatg tattgtatac tttttctcgg 360
 gtaataacta agatggatgat tctgacatgt 390

<210> 1473
 <211> 424
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-B3
 <400> 1473

ggctctagaat tcccgggtcg acgggtagct ggaacatcaa atagttctga ttctttttgc 60
 actgtcttcc tatacaaatt gtttattttg cctaattttg gtagaatttt taaagtatca 120
 taagtatggt gaatgttcaa attattacag actgttctgt tttagacaga ttctgttttt 180
 gatgcatagt ttgcttggtt tgatgaaact gtcaatttat atcagtggat taagccatga 240
 aaaggttata ctacagtaga aacaatgcaa aaacaaaata tgaattgggt tgcaacagta 300
 cttagagtag tgatttgctt cattatacta acggatctta ccgagttttc tgttgaagtt 360
 ttgtgtggat gaagtgttgg atgattgaga aggtttcgat gtgagaagaa ggaagagagg 420
 caag 424

<210> 1474
 <211> 385
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-C1
 <400> 1474

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 cttcccacta cctgagaatt ggaaggctga tgtcttacag gcacagcgac ctggacatac 120
 cccatcccat gaggttttac aggtttatatt aacctcttgg cttgctaatt tgaacatcaa 180
 gacgagtaga attgacgaga tattttgagct tgttgaggaa gagatgcaga tcaaattgcg 240

ttgaagattt cgattcatag aatttaagtg ggaaccattc gggaatgttc aggggttctt 300
 tttcattaac ggaagtgatt tacgcgaaaa tcatccactt agactcaaaa caaaaagagg 360
 ccgctctaga ggatccaagc ttacg 385

<210> 1475
 <211> 157
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-C10
 <400> 1475

caagcacctc aacaatttca ataaggcct cccctcccaa gcccacaaata gatggcgcg 60
 accgccattc gagatggcgg cggtctctaa gggccaagc ttacgtaggc gcgtatgcga 120
 cgtcatacct ctgcaatcat gtcaccaga ttcaatt 157

<210> 1476
 <211> 409
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-C3
 <400> 1476

attcccaggt cgacgggaca attaaggcca ggcagatgat gtctggatga gaacttatga 60
 tgtctgcgga aggtcggagc tttgtggatg gtggcatgaa ggagatagaa gctggagggtg 120
 gaggatacag aagaggggca aatgatgact tcatggttta tggacaggac aactcaatgg 180
 acaggaggag ctcttggac ccccttgccg aggcgcatta caagagactc actcctctag 240
 aggaaaagaa gaatgtgcac agtatgggag atgagtcctt catgatacct gttacctcca 300
 actcacagga taatcttga gcagccggcc gtactgccat tgacatagat gccgagcttg 360
 gctcaagtgt tcagaaaaca tcagatgcta aggctggagc tgaactttt 409

<210> 1477
 <211> 344
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-C5

<400> 1477

ccggtcaaga actcccgggt cgacgggaaa tgataatata aagtatgctg ctgttgcatg 60
agttaagtcc tctcagcgtg atccaaacaa atccaaaaac aattaatttg gaatggaggt 120
aatacaaacc aaagtaattt gcccaacaat caccaagcca catacatgca acattgtacc 180
gagtaggcaa tcaaactttc ttttgacatt gattaggaaa aaaatggcat gacttcatgt 240
gcgaccacta aaactgtgtg agataccctt ttttgtaata gatgatgctg catcaacaca 300
tcctgatagt gagctgtgtt tgaccctagg gatattgcct ctgt 344

<210> 1478

<211> 449

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-C6

<400> 1478

ggtcaagaat tcccgggtcg acggggcccc gtaccctggg cgtccggatt catcgaagat 60
ttgtgtccgc cagccggtag agctaacgct gagctcccca acaaaccacc cgtacttgga 120
attgatgcag tcatgtctta tctctgttag aagctactag gtgccatgga tctcaggctc 180
tcagctcaag ctccgtgtcg ggacgagctc tgggtgccctt gctcggcgag tactttcaga 240
tatgcacgct gtcgatagtg gtgaatccat gctgcaatga acacaacaac attataggac 300
cccgaactgtt agcttttttg acaaagggga tatactaata tcgtgaagat atcaattaca 360
cccagccttt gcatcaacac agacaataag catgcacaca accaaggaga agaaggattt 420
ttcgggacaa ataaaaaagg ggccgctct 449

<210> 1479

<211> 400

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-C8

<400> 1479

ggtcaagaat tcccgggtcg acgggcattg ggacgttcaa ggagcagttg atgtggacat 60
tggagccaat ccctctgctg agggtggtgg tgatgatgag ggtgtcgatg accaggccgt 120

gaaggtgggtt gacattgttg acaccttccg tcttcaggag caatctgctt ttgacaagaa 180
gcagtttatc tctcacatga agcgctacat caagaacctc tctgccaagc ttgaagggga 240
tgacctagat gttttcaaga agaattgttg gtctgccaca aagtatcttc ttagcaagct 300
caaggacctt cagttctttg ttggcgagag catgcatgat gatggcggcg tgggtgttcgc 360
ctactacaag gagggagctg ctgatccaac tttcctgtac 400

<210> 1480
<211> 388
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-035-Q1-E1-D10

<400> 1480
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agaccttga aaggacttaa agacaataac tttgcaatgc taaatggcac gtgagcaaag 180
gatatcaaga agcttttga tgttggaag cttggagctg atgcttcaaa taagctgatg 240
gttgtctttt ggagatgttt ctatgtttaa tgctttaaag tcttttggct gtactggact 300
atttaaactt tgaactatgc tgtgatggtt gaactgatgc tggacagtta acggttatgt 360
cagangcaac tttataacta atgtgtgt 388

<210> 1481
<211> 422
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-D5

<400> 1481
ggtctagaat tcccgggtcg acgggtacgg ctacgagaga gagggagaga ggaggaggac 60
ggagtcatg tgtgacaaag acacaaagag tgtgtgtgcg agaggatatca gcttaaaatg 120
aggtgatagt gtgtgtgtgc acgatcgaga gggcgtgtct caagaaggga cgaaaaatct 180
acatagatac aaggagcgcg agagagacat gtacgcgata gtggaagcac gagtgtgcgg 240
gtgtataaac ctatctggag gctagtcgat caatgtttgt gagagaaata cgagtcgggt 300

gtgcgaaagt gagagttttg tgtgtgtgtg tgagagagag agagacggta gtcgggaagg 360
ggagtggaag caggagtgtg gtgtgtgtgt gagagagaga gagagggggg gggagagttt 420
tt 422

<210> 1482
<211> 398
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-035-Q1-E1-D6
<400> 1482

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aacagatgat tttgtttgga gtgatgctgc gaactctacc tttgaggatc tgaagaaaca 120
gcttgctgag ccaccgggtc ttgctgctcc aattgagaaa gagccgctat tgttgatgt 180
agccgctaac tcacgggctg ttagtgtggc aatcgtggtg gagcgcaaag aggttggcaa 240
tgaacagcca gttcaatggc cggtttatta tgtgaatgag gtactgatcg aatctagaca 300
tagatatcca cattggcaga agctcgtgta cggggtgttc atggcaagcc ggaagctcaa 360
gcactatddd cagggtcacc cgatcactgt ggtagct 398

<210> 1483
<211> 379
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-035-Q1-E1-D7
<400> 1483

gacggggaga gctaaatgcc ttcgtatcag atgatgaaga acacagacga ttttgtttgg 60
agtgatgctg ctaactctac ctttggggat ctgaagaaac agcttgctga gccatcggtt 120
cttgctgctc caatttagaa agagacgcta ctgttgatg tagccgctaa ctacggggt 180
gttagtgtgg caatcctggt ggagcgcaaa gaggttggca atgaacagcc agttcaatgg 240
gcggtttatt atgtgaatga ggtactgatc gaatctagac atacatatcc acgttgacag 300
aatctcgtgt acggagtgtt catggcagtc cggaagctca agcactattd tcagggtcac 360
ccgatcacgg tggttagct 379

<210> 1484
 <211> 362
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-D8

<400> 1484

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 ccatattttc ttgttaagct gcacgggttg aatgctccaa taccttcttg cttaattaga 180
 acaagaaggt cccctgggtac ttcattttct tgggtatgaat aatacattac gagcgatcaa 240
 cctgtatgat gggtatcctt ggatggacgc gtctcaatat aatctctctc tcagtgcaca 300
 tttagacact ctatcatgga tagataacaa tgctctactc gtgtctcttt ttctttccct 360
 tt 362

<210> 1485
 <211> 384
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-E5

<400> 1485

ggatcaagaat tcccgggtcg acggggaaga agaccaaggc ggagaagcgg gcgccggcga 60
 ccaaggaggc cggcggcgag gggaagacga ggggcaggaa gaagggcagc aaggccaaga 120
 agggcgtgga gacgtacaag atctacatct tcaagggtgct caagcaggtg caccgggaca 180
 tcggcatctc ctccaaggcc atgtccatca tgaactcctt catcaacgac atcttcgaga 240
 agctcgccgg ggagtccgcc aagctcgccc gctacaacaa gaagcccacc atcacgtccc 300
 gggagatcca gacctccgtc cgctcgtcc tccccggcga gctcgccaag cagccggtct 360
 ctgagggcac caaggccgtc acca 384

<210> 1486
 <211> 449
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-E7

<400> 1486

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gtgatattag agtcatgcta gtgggtggtt gtggattgta gagacacttg tgttgagggt 120
tgcaagtccc gcagcatgca cgtatggtaa ccgttgtgtg acaaatttga agcatgggggt 180
gtttctttga ttgtcttcct tatgagtggc agtcggggac gagcgatggt attttcctac 240
caatctatcc ccttaggggc atgcgtagta gtactttgct ttgaggggcta ataaactttt 300
gcaataacta tatgagttct ttatgactaa tgtgagtcca tggattatac acacttttac 360
ctttccatca ttgctagcct cttcggtagc gtgcattgcc ctttctcaac cccaaaattt 420
gggtgcaaact tcgccgggtgc atcaaaacc 449

<210> 1487

<211> 449

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-F5

<400> 1487

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actaccggcg gcgatgaggg gcatcttgag ggcggtcgat cccagcggc gacagcgaca 120
aggtgcggtt cttctcaacg gatctgcagg gatggtgcgg cctagcgggtg attgaggggtg 180
caaatgcct cgccgacgct attccaccgg ctgatttggc cggaatcggg ggccgaggac 240
gggcggaact tgtggcgggc ggccgcgga ggaggtgggc aaaggggcac gggctgaaat 300
gtccctccag ccaaatgctt cactgcgata tggggcaccg cagggacgag gcggaaaccc 360
gcgaacacgc gggtagggc cgagtttttg tcgcgccct caaaaaattt ttgcggggcc 420
aacggttggt tccggggtcg gtttgggtg 449

<210> 1488

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-F6

<400> 1488

ggccaagaat tcccgggtcg acaggcatgc acaaggggaa tcaggcgact tgccgtacgc 60
ggtaggttgc cctgcgttca gtcgtgagct ggcgaagtct agtggcccag cacgaagaat 120
ttcaagcgag acgtaccaga gatgtatgac ggcaagtcgc atccgtcgga gttcctgagc 180
atctacacca tcgcggtgca agctgccggg gggcgggacg acaagatgct ggccaacgac 240
ttcccgtcgg tgctcaagcc caatgtcaga tgctggctca tgcacgtgcc ggacaactcc 300
atatcctcat gggtagactt atgcgatcag tttgtcagcg cctttacaag cggtcacaag 360
cctcatggcc aagagagcga ccttcatctg ctgcccaga agga 404

<210> 1489

<211> 455

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-F7

<400> 1489

ggccaagaat tcccgggtcg acgacgcctc caactccagg gcgtccatgg cgcacctaaa 60
ggcagtctac ttctccgcc cgtcctctga caacgtccag aagcttcgct gccacctctc 120
tgccgccgca ttccgccgagt gccacctctt cttctcaa atattgaaga ttccacagat 180
tcagggtgctt gccgattctg atgagcagga ggttgtgcag caaattcagg agttctatgc 240
tgacttttgt gccattgatc ctttccattt cactctgaat atacacaata accacatcta 300
catgcttcca acggtggttg atcctcctgg tatgcaaagc ttctgcgatc gagctgttga 360
cggcatcgct tctgtcttcc tggctctgaa gcgtcgccct gttattagat taaaagggga 420
catcaaaggt cgcaaaaagg attgcacaag aaact 455

<210> 1490

<211> 249

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-F8

<400> 1490

cccgggtcga cgggacgacg tagaagacga agatgaagaa gacgaagaag aaggagaaga 60

agaagaagaa gaagaagaag aagaagaaga agaagaagaa gatgaagaag aagaagaaga 120
agaagaagat gaagaagaag aagaagaaga agaagaagaa gatgaagaat ttgaagtaga 180
tgaagtagaa gaagaagtag aagaatatga agaataatca gtagtagaag aagatgaagt 240
tgattaatt 249

<210> 1491
<211> 95
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-G4

<400> 1491

ccgggtcgac taacctggct atattaaagc aaacgtgttt tggctcaaat caaaggcaat 60
gtttaaagat gagggattta gtcaggagct tctta 95

<210> 1492
<211> 330
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-G5

<400> 1492

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gtgtgggaga ttcataaaag atataacaca gaaaaaaaaa aattaaagaa ataaatagag 120
ctaaaaaat aataaatcaa acgatcattc agataacaag agattcaaag tgtataatag 180
ataatggaac cacgattgcc agtaaaacaa aaatagatta acaaaagaat tgggtccacac 240
gtaggttccc tatcaactct atgggttatat cctacttaaa cgcctttcag tgggtcatacc 300
atattctaatt ctgggggtcaa ttttttttaa 330

<210> 1493
<211> 414
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-035-Q1-E1-G7

<400> 1493

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gcgggtcctt caagctgatg tgcggcaaac ttcaccttct ccgcatctgt gcatcctgtt 120
gtgggtcaact ctctagctgt cttgcggagc caatcatctg ctactatcgg ctcggtgcta 180
ctggaaagca ccggtggatt cagcctaaga aaatgggcta agtgatcaac aggtgggtgg 240
gggtgggtg ggttgttgtt gttgttcccc tgattctgat tctggactag caactgcatt 300
aatgtgttct gccgctggat caactgggtg agctccagt gaaaggtaaa tccgaggtca 360
cgtctcgag gcatctgang gtttagaaaa gatgagattt aagaatanag gggg 414

<210> 1494

<211> 395

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-H1

<400> 1494

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cagcttctga aagtaattca gaagttaatg gtacaggaaa aaaagaggat atagttgggtg 120
gtgcagagaa taatggtaaa agtacggaga gcttaacaga aaaaaatgag agtggtgaga 180
taaatagagga cttggatgat ggggttagca aagagttgga aggtggacat gagcaatgca 240
atgaggttgt tcgtaaccaa aatagcgagg aagcatcatc attgggtcaat gaggagtctg 300
ttgatgtaaa agcagctgac tgttcagagc acagcaaac acgcgaggaa ggttcttcga 360
tttctaaaaa tgatgtgctt gcagctactg catgt 395

<210> 1495

<211> 454

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-H7

<400> 1495

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gcacgttatt aaggggggatg gcagttcatg aaattggcga ggcgcagcgt gggcgcgaag 120

gggagtgccg acgttggcag cgagcgcata tgtccatcat taaaacagag atcctcgagc 180
 tgatcaaggg cgggggatcg gaaccactcc tcaagcttgg ctcggtcatt gccgttggaa 240
 cagaacttgc cgtgccaaagg cctctgattg ggccatggtg actgccgagg atctggggaga 300
 acgcatccaa gcttttgcaa tagccatggc agagctcgtg ggtgtcaagg aggtcgagat 360
 ggggtggggag ccatcggggg cgccacgccg ggaaggacg gttggtctcg ccccaaaatt 420
 tgattggaag gagatttatg atgactgtca acat 454

<210> 1496
 <211> 253
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-H9

<400> 1496

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 cctcgtacac tctctccct ggggagctca ccaagcacgc cgtctccgag ggccaacagg 120
 ccgtcaccaa gtttacctcc tcttagatcg cgtcgctgt atctagtagc aaatgtagtt 180
 ccatgctgtt ggcttaatgc ttgtctgtgg actctgggta tctgcaagta atattagtcc 240
 tactgttgga aaa 253

<210> 1497
 <211> 267
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-A1

<400> 1497

acgggtgaaa tgcatttttg ttaaagtctg gcaccctgca caacggacct gttcctttga 60
 gttttgggta ttatcttgct ggagttatag attgtgttat cgggattatg tgccgtgctg 120
 gcatttggat attgatctta atccgttcgt ctggcaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aaaaaaaaaac aaaacaaaaa aatattaaaa acaaaccgg aaaaaggaca agctaattgag 240
 acaaaacaag gggccgacca agaggat 267

<210> 1498

<211> 449
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-A10

<400> 1498

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cgggtcaagca ttccccgggtc gacgggggatg cgaaagtcca ggcagagaaa gccgctgccg 60
ctgctcctcc agctgtgacc tacgcggcga aggtggccca aacagcagcg gccgagaaga 120
agcctgtggc caccgagaaa aagcctgtcg tcgccaacgg tgctgtcaag accggtgtag 180
ctgcttgatc gcatacctga tcctcccagc tagccatgag gaacaaacgg acggtgctgg 240
cgaaccaggc gagacatgca gggccccaaag taccgatcac caaagggtggc tggaaagcgg 300
gttgatagtg taggtttatt ccctagctct ctttttctcc tgatcatcgc gtattatccg 360
tatttcagtt tgcttagctc taaagactcc tcctatagtg gtatcatcgg aatcaccaga 420
naaagagaaa agagaacctg tggcaagac 449
  
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<210> 1499
 <211> 481
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-A2

<400> 1499

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acgcctgctg gtaccggccc agaattcnca ggtcgacggg catcatataa gtttccgac 60
tattttatct tgcaatcttt acttttcaat ctatatcata aaaataccaa aaatatttat 120
cttattatct ctatcagatc tcaactttgc aagtggcgt gatgggattg ataaccctt 180
tatcatgttg gttgcaaggt tcctatttgt ttgtgtaggt acaatggatt tgtgtgtaga 240
ctcctactgg attgatacct tggttctcaa aaactgaggg aaatacttac gctactttgc 300
tgcatcacgc tttatcttca agggaaaacc aacacagtgc tcaagtggta gcaagaagga 360
tttctggcgc cgttgccggg gaggtctacg cacaagtcaa gacataccaa gtacccatca 420
caaactcttc tcctcgcat tatattatct gccatttgcc tctcgtttct ctctcccca 480
a 481
  
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<210> 1500
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-A3

<400> 1500

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 catgcacaag gtgcgctccg agaaggaccg caagatcggc ggcgagatga gctacctcga 120
 gaacatgatc aggggggaaac aagcggagcg ctacgggtctg tgtgacaagc tcgctcatgc 180
 tcagagcctc aagggtcggtg aagggtggatc cacctcgctg cacaacggcc tggacctcaa 240
 acttggtatc aactaggaac ggggtgaaagc ttctggccgt ggggttctgc tctagtgttg 300
 cttttgagct cgagtgttat gtcaggttga aatattctgc aatttccttc gaagggttg 360
 tatgaacttg tangagacca ctgtcttatg agatgtttgg cttaagctgg actgggctg 419

<210> 1501
 <211> 441
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-A4

<400> 1501

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 gttcagcctc ttggatgtga gtggaagtat cagggcctgc aagaatgccg cgctggagtg 120
 cgaagaaccg aagtttgatc agtacaagct ggcagctggg gatcgtatga cgcacgagat 180
 catcgaatcc gtgcagagtt gcgttgccaa acttaaagga ttacacagtt agtaaattaa 240
 gtttggtcca tgccagcagt ctcgaaaaga accagtaatc tacacaaact gcattgtcgt 300
 tgcactgtcc aatggcgccg caagaatgca gcttccatgc ccaaacagg cccattctgg 360
 aaggagctta tggaaaatga tgttcttgtg gaagaaatgt tgtgtaacta atcatgatta 420
 agccagcatc tggatatggc c 441

<210> 1502

<211> 445
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-A6

<400> 1502

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 atcaaatagg cgcccaacgg gtcctcctcaa attcaactgg caggacaatc tgggctcccc 180
 atattattga tagtaaattg gaaaatccca ttcatttgtc tgccaaatta tcaaaatatg 240
 aagaatccat cgtgaccatt ttttcggaag gatgcaaccg tcattttcta gtgtaacaag 300
 cagtcaaatt atttgatggt taacaaatat ttccgtttta agggaccgca atgaacataa 360
 ctcatggcaa agttccttca tttcccaata ttaaaacaac cccataggcc agtgtgttag 420
 gcatcatcta ataaaanaat taaat 445

<210> 1503
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-A7

<400> 1503

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 ttgctccatg gcgcggggcg aatccatgga tacaaaatta gtatatttta tactattttac 120
 aagtcgaggg cggggctttt cctgcgaggt acgcggcggg gcagttccgc ctagtcgggt 180
 ccacatagac acgataagac gagggagtat gctgttgcac acgtagggct gtgtgatttg 240
 acagtgagtt actgctggac aggtggggcc cctgatttg acttgccatt atcattttta 300
 ctgcggcgct acgaccggtg tgagtctcgc aattcctgac cacctccata caagtgcctc 360
 tcgcaatgct ccaccattta gtagaggctg gctcttgcac gaaagcctac ttatccaatt 420
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<210> 1504
 <211> 443

<212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-B1

<400> 1504

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 gttgagaagg aaaagcagaa ggctgaggag gctgcagcag ccgattcaga nggactttct 180
 gagtccanaa agaagaatat cagcgttttt gtacaaaatc cctgacattc aattcttga 240
 accttacagg atcaagatca ttgatattat tgagaaagga agagaagcag cccaacatta 300
 caatttcgat cttggcctca gttgctgtca tccttggtac tgtgctcttc agaaccattt 360
 tcggtggcaa gaagccattg gcacctgtga agcccgttgc cgaggtcaag aagcccaatg 420
 ccacggaagc tgatgccgct gga 443

<210> 1505
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-036-Q1-E1-B10

<400> 1505

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 ttgtaggtta acaaacaggc agatttcatt tgggaacata gatgagggga aatcaatcaa 180
 tcaagcaaag aaagaaagaa agaaacagat atcatcacgc acctaataca tcaatcaatc 240
 gatggatcaa tcaaagaaat taagcacgat gagacagatg gagagagggga cgacgggaga 300
 gagacgaact gtctttgggc ccgtggaagt ggacgaagaa ctcgtgcacg gcgtcggtga 360
 tcatgtccac cttgtaatcg ctcatcatcc tgaccaatca atagaagcaa gctagctatt 420
 aaacatgaat caacaatcct c 441

<210> 1506
 <211> 340
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-B11

<400> 1506

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agacagagag ttgtgctgcc tagccttggt tcgaaccctg ctatcgggaa cctttgccat 180
gttattacgc cggcctcttg aatttgcacc ctacctgcgc ggctgcatgc tgtcaatggt 240
ttggtatgtc tcgatcatga ttcttgatga caaatgtgga ttgaggtacg tcgtgacaca 300
gaccagctgt ctttggggccc gtggaagtgg ctgacgatct 340

<210> 1507

<211> 463

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-B12

<400> 1507

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tattcctcaa gtgatctctt cagaccgtgg tagcatcttt acatccaagt tttgggattc 180
ttttcagaag gccatgggca ctaacatccg cttcagcaca gctttccatc ctcaaactag 240
tggtcaagtc gagcgtgtca accagattct tgaagatatg ctcagggtt gtgtcatctc 300
cttcggcatg aaatgggagg attgtcttcc ttatgctgaa ttctcccaca acaacagttt 360
tcaagcaagt tcgggcaagg cccattcaa aattttgtat ggcaggaatt gccgtacccc 420
tctcaactgg tctgaaaccg gtgaacgtca gcttttgggt aat 463

<210> 1508

<211> 462

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-036-Q1-E1-B2

<400> 1508

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gacaattatc ggtatgtctc ggtttttgct ttcttcacat gacatgcgta aattcctgga 180
gtgtcgtgtg ctttttattt ttatttttag taatgcactg ttctggcatg agatagtcct 240
tggtttattt atagaattct ctttgcactt cacttatatc ttttgagtgt ggctttatag 300
aatgcttcgt gtgcttcact tatatattt gaagtttgga tgctcgtttc tctacattgg 360
agcaccatta tttgtagaat gctcttttgc tttagttata tttgttagag cgtagaagag 420
tctttttagt aagaattaa cttgcatgct tcaattanat at 462

<210> 1509
<211> 423
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-036-Q1-E1-B3

<400> 1509

attcccagat cgacgggaca tagttcaatt gcaggtacgt aatcgagctt gcgtgtttcc 60
tgatatggag acaaaggaga tgcatangca gaagtgtggc tcttgctccc cattgtttga 120
gatcgacctg ccatctcacc tacaagccat gaaagtttcc tcgtagctag caagccagcc 180
aagtaggtan ggtatgttac aaatgtattt accacgacct tgatcgagtg gtgcttgatt 240
agtcataact agattttatt ttatcatatc atgcaagcac atgaatacat ggtccactga 300
gtaatataaa gtcaacgcga catcgcataa attccatata tacattatag aacaaggatg 360
gatattttat atctatacaa gtgtatgcat gtcccatgca atcaagaaag ttcgatcata 420
ccg 423

<210> 1510
<211> 442
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-B6

<400> 1510

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 aggaaaacac ttgctgacaa gtatgactat gtcatgcatg gaaagcttta cgatatttca 120
 gaggacaatt ccagcaagga taaaggacct actaaagtgg agatctatgc atcttttggc 180
 ggccctctga tgttgctcaa aggtgatcct tcaagtgtg ctaacctcga gctggatcag 240
 aagctgttcc tcctcatccg aaaggtgtaa acgtgtcatc tacctgataa ccagcgcttg 300
 tagttcactc aaggctatac caagcctgtg atcgtttggg ggctaatacgt ccgagaccct 360
 tatgtactct tttggcggtg atacgactct agattggtac catggcttca ctgtatcacc 420
 agtcgcttat tcctgttccc ct 442

<210> 1511
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-036-Q1-E1-B7
 <400> 1511

tcccgggtcg acgggacgaa gcaaatacgg cgtgtgcata gtcattgccg aaaaagaaca 60
 caatgacggg gaacaccacg tacctaattt tgggagcttc tgttccgtgc cttaaccgcc 120
 cgaacatttc cctcgcgctc acacatccac actgggtgggc cggcacaaga agaaggcgag 180
 cggttgatc gtctgttcac gagaaaatgt gagcaccatt ttttaactgt aatttctctt 240
 ttggagttag agcatctaata atggatgctg atagggttagc caagtttgca cattctcttg 300
 atcaggggct gacatgtctg gctagaacaa acccatgttc cgaattgtaa tccacatcat 360
 gtggactttg agtcataaag cttgggtttaa cacttacaaa atgagacaat gtgaacggcc 420
 tcgttcgttc 430

<210> 1512
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-036-Q1-E1-B8
 <400> 1512

cggtccagaa ttcccgggtc gacttccacc aaagcgaaat ccaccatctc atcgaaagac 60

gggacacctt tgcctctatc aagtgggtatc agatttccag gttgctcggg gagattttac 120
 agttttttgt agtttagatc gagtctgttc ttcataccta cagtccacga aaaagccaca 180
 aaaaaaaatt agggtagtt catcatatcc gaaccaatct gagcctttgc ataattttt 240
 tagggttttg ctttgttgaa tttgcgggtg catcgtcgtg tctagttgct ggtcttagag 300
 tctagtcttt tagagtttcg agttctggtc ataagttgtc acgccgccgc cgcaccatca 360
 tcatcaccac tgccatctac caccaccgct tatccgccac cgcttcgaat ctgtatccat 420
 attacaccac aactgtcata t 441

<210> 1513
 <211> 371
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-C11

<400> 1513

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 tggatatgat atgtttgatt cctcgcaata gttttgcgat ataaaagtgg tgatattaga 120
 gttatgctag tgggtgactg tggattagta gaaacacttg tgttgaggtt tgtgattccc 180
 gtagcatgca cgtatggtga accgctttgt gatgaagttg gagcacaatt ttatttattg 240
 attgtcttcc ttatgagtgg cggtcgggga tgagcgatgg tcttttccta ccaatctatc 300
 cccctaggag catgcgcgta gtactttgtt ttcaatggct tgtanatttt ttcaataagt 360
 atatgagttc t 371

<210> 1514
 <211> 460
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-C12

<400> 1514

accggtcaag aattcccggg tcgacggggc tagtaaaaag tggatatgaac catagagaac 60
 tttaaataca gtaggtttaa caccaatata aataaataat gagttcatta cagtaacttg 120
 tgtgggtggtt ttgctttctt tcaactaacg agcttatgag atttcctggt gagttttgtg 180

ttgtgaagtt ttcaagtttt gggtaaagac ttgatggact atggaataag gagtggcaaa 240
 agcctaagct tggggatgcc catggcacc gaagatactc aagaatagcc aaaagcctaa 300
 gcttggggat gccccgggaa ggcattccct ctttcgtctt cgttcattgg taactttact 360
 tggagctata tttttattcg ccacatgata tgtgttttgc ttggagcggt cgtgtatgat 420
 atactatttg atttttagtt tacacagtca tacttgctgt 460

<210> 1515
 <211> 395
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-036-Q1-E1-C3
 <400> 1515

attcccgagt cgacggggcc aaagtatgag ctcgagccgc cagccagcca acactaagct 60
 ttcgagcaac aagacagtga ggagggtccg tgtccccgga ggtaacgtga agtggagggc 120
 tctccgtctt gacactggta acttcccatg gggtagtgag gctgtgacct gcaagacctg 180
 tctcctggat gtggtttaca attcgtcgaa caatgagctt gtgaggactc agacccttgt 240
 caagaatgcc attgtgcaag ttgatgcagc ccctttcaaa cagtggtaac tgactcatta 300
 tggagttgaa atcggtatga agaagaaagc tgctgcagct gccagaagg aagctgctga 360
 gggacaagaa gctgaagttg ctgctgctgc cacag 395

<210> 1516
 <211> 439
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-036-Q1-E1-C6
 <400> 1516

ggtccagaat tccccgggtcg acgggtggaa ggccgccaag gtgctcgtcc gcaggggccc 60
 caactggaag atcagcgaca ggaagcactc cgagatctca gaaactgagg atctcagcaa 120
 gggcaagagg agggccggcc ttgttgccaa ggtactgaga gataaaaaga aggggaaagg 180
 cgctgccttg ccgggaaaca ttcacccatg tagtggaatt ctgattaagg taccggatga 240
 tgctgccatt gaagcaccaa aaagaccaag aagctgcgaa ccagtaccaa tagcccaaag 300

tgcacctatt cttcagttac caagttcaag tacctgtagc cagccttgaa ggtggcttta 360
 aaacagaaat gaaggcatga agccaggaat cgcataagcaa catattttca ttactttggg 420
 attaacaaat ttaacaaac 439

<210> 1517
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-C9

<400> 1517

gggtcgacaa gaataatcat gaagaaacaa atcatataac cgaggaagag cgcaagagag 60
 atcatagaaa tgctcttagg agagcatctt atcggaggaa aaaggataag ataaaagcag 120
 atgaaaatgt acggccacga cctaagacag gtacgtacca gcatttttag atatgcacgg 180
 tgcatacctt atcataccaa cagtttcttt atgttcacgt tgactgacaa atcatttgct 240
 cacaaagcct accgtcatat gcttgatctt actaaaggaa tgttcttctt ttcattagtc 300
 actaaaatag actttttcta atgatcattt cacatctact ttcataaagg cacctctgat 360
 agcgctaact atccagactt gttgcatgat gatgcaacat taccaaactc atcattagac 420
 gcctccggtg ttacccttaa tt 442

<210> 1518
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-D1

<400> 1518

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 ggtggaacat gggacagaga cactgtgctg cgtgccctac gtgctgcatt caacaacccg 120
 gagcgggctg ttgagtatth atattctggt attcctgagc cgatggagat tccctgcacca 180
 ccaccaagtg cccagccagc tgatcctgcc ctggcttcac aagcagctca acctgcagtt 240
 gcctcttccg gtcctaacgc tagccccctg gacctcttcc ctcaagccct gccaaatgct 300

tcagcaaatg ctgctggtga aagaaatctg gatgttttgc gtaacantgc acaattccga 360
aacttaactt ctttagtgca ggccaaccct caaatcttac agccattgct tcaagagctg 420
ggaaagcaaa accctc 436

<210> 1519
<211> 208
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-036-Q1-E1-D2
<400> 1519

cggggggtga ttagactact tgaccagata aaaatctagc attttcccaa ttatagttct 60
tggcagattt tagcaactta gcacaagtca tgcaatcaac ctacacatgc aattctaaga 120
gtatagcagc ggaatgtaaa acaatttcat atgaaggtaa acggacgagt ttgagaaggc 180
aaacacaatt ggagacacgg atgttttt 208

<210> 1520
<211> 438
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-036-Q1-E1-D5
<400> 1520

acggtccaga attcccgggt cgacggggtg gggtagaaaag aagcacaagc gagagtggtc 60
accgtataac cttggatggg gatgaattgt gtgctcgga gagtgtgtgt gtgtgtgtgt 120
tgtgtgcac gtgtgtgtgt gtgtgtcaga tattgagcga aaacaaacct aaggagagaa 180
atgggtattc atgaagagat tgtgcgggcc ttgagggtgcg caggggccga gtgaggggtgt 240
caaatgccc gcgtttatgc atatgttgca tgcgatcgtg cgaggacag acgaatcgag 300
agagatgggt gttgtgttac ggatgtctct ctctctctct gtctatctgt ctctctctct 360
ctctctcaga cacacacaca cacacacaca agtaaaatag aagaccgttc tctcatgtat 420
acacaacgta tcggcatc 438

<210> 1521
<211> 280
<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-036-Q1-E1-D6

<400> 1521

ccggtccaga attcccgggt cgacgggctg caggacacgc aagatcacct ccctctgggc 60

gcaacctgaa atctcaccca catcatctct cctaataattt gacaaagtca tgatgcagtt 120

ccggtcccat cgacgaccag cattccttcc tacgtatgct gaaaggagtc atcgcaaaat 180

cgccttctct gccttgcatg gattcatgca aatgatacat ctccgggcaa tgtatgtgtt 240

gaaccgcgaa gtgacgtacg ttcggcacta agatcctccg 280

<210> 1522

<211> 430

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-036-Q1-E1-D7

<400> 1522

attcccgggt cgacggggga ggctattact tggcatgtcc gcacactttt taagctgaaa 60

actatgatta ctctgttta taatctgtca gtaacgagtt ctacttgtgt ttttatttga 120

tggtatgtgt gattatgatt tcatatttaa gctttccttg tatgtacttt ttctgttcta 180

aatactttac tcaggataac aatactcctg cctactatat atttggtgct atctctgac 240

actacattct acttttgaat ctttgtagac accgtgtggc cacaacttct gtttgaaatg 300

ccttgagaag tgggttaata gtggaaaaag gacctgtgga aaatgtcggg gaccaatcac 360

atccaaaatg gcttcgcagc caatgattaa agcagcgttg gttgcggata tccgtatggc 420

taggactgca 430

<210> 1523

<211> 404

<212> DNA

<213> *Triticum aestivum*

<223> unsure at all n locations

<223> Clone ID: LIB103-036-Q1-E1-E1

<400> 1523

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tcaatctttt gctggtgctg ttgctgttgt tgcattgttct gtggtataa tgttgaatga 120
aacagtaact aaagcgttct tttagtaaag agaaaaaag gtaaagagac tataaagata 180
tagtatattt gacttaactg aaaacttaag aaggatataa acaaataagc tggatttgca 240
ctaacatcgt tagatgaaac aaacattttc cataaattcc aaatgggtcc atccgtgaag 300
gacggaatta tagagcacca tagtttagtg tactttaaaa tacaagtggg ttctcatgct 360
atgcttataa tcaacctaga aagctgaata tgctacaaca caaa 404

<210> 1524
<211> 462
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-E11

<400> 1524

cggcgaagca ttcccgggtc gacgggcat agaagaaatt aatgtgttga gtggaaagat 60
ggatgaactt atgaaattat ttgctactaa gagtgtttct tctgaccta ctgatatgcc 120
tttgtctact ttgattgaga ataacaatgg atctatggat gtgaattttg ttggtaggaa 180
taatttttgt aacaacgctt acagaggaaa ttttaattcc aggccatata ctagtaatcc 240
ttctaataat tatgggaatt cctacaaca ctcttatgga aattataata agatgccctc 300
tgaatttgag actagtgtta aagagtttat gaattcacia aagaatttta atgctttgct 360
tgaggagaaa ttgcttaaag ttgatgattt ggctagaaac gttgatagaa tttctcttga 420
gattgattcc ttaaagctta agtctattcc tctaagcat ga 462

<210> 1525
<211> 189
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-E3

<400> 1525

attcccagat cgacggggat cgagggtcac tacctaggag tacgtggtgc agctggacga 60
gacgacgctg accgagcagt accccagcga caacttgggt ctcaaggacc caatggcaat 120
caacaagcag ggggtgaacc cgctcaaaac aacttacttc aacaacaaa acgtccggcc 180

gaacctcgg

189

<210> 1526
<211> 441
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-E5

<400> 1526

tcccggtcg acgggtctgt caaacataag cctcattata tcttcctcaa aacagccacc 60
atacctacct atcatggcat ttccatagcc attccgagat atattgccat gcaacttcca 120
tcatcatcac atacatgact tgagcattta ttgtcatatt gctttccttg atcgtaagat 180
agctagcatg atgtttgcat ggcttgtctg ttttttgatg tcattgctac gctagatcat 240
tgcacatccc ggtacaccgc cggaggcatt catatagagt catatctttg ttctagtatc 300
gagttgtaat attgagttgt aagtaaataa aagtgtgatg atcatcatta ttagagcatt 360
acccagtgga ggaaaggatg atggagacta tgattccccc acaagtcggg atgagactcc 420
ggaccttaaa aattaattaa a 441

<210> 1527
<211> 451
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-E6

<400> 1527

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ctggaccact cctggcaatt gtggggtttc ttctgtttgc gctcatatgg agtattccag 120
aagccctaat cacagctgag atgggtacta tgtttcctga gaatggtggc tatgtcgtct 180
gggtctcttc agctcttggg cccttttggg gttttcagca aggctgggca aagtggctca 240
gtggtgtcat agataatgct ctctatccag tcctttttct tgactatgtc aagtccagta 300
ttccagctct cgggggtggg cttccaagga cttttgcggt gcttatcttc acagctgccc 360
ttacttactg gacctacaga ggaataacga taggtggctg ggtggcagtc cttcttgggg 420
tgttcactct gctcccttct tttgttatgg g 451

<210> 1528
 <211> 315
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-E7

<400> 1528

accggtccag aattccccggg tcgacgggca gctcaaagcg taggcgtcaa ctgttatgta 60
 ctcaacatgt taccacacca ttggctggcg ttgtcacgga ttgttgacgt agcatttgta 120
 ggggttccatg cggcgctctg acccgagct aaagttccac cataggaagt ttgaccaatt 180
 tgaactttaa cagtatgcta attgcctgcc ctcaaatttg ggagcctatg gttcaaccgc 240
 cgggtacctct aagtggacaa tcgtgttgcg tgtttgtaat caccatctgg taccaatccc 300
 attcacgac acggt 315

<210> 1529
 <211> 378
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-F1

<400> 1529

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 cactgctgga tttgtactgc gtagctcaca cctcatagtc tgggtgttgc ttggatgtgg 120
 atgttttctg ggatgtgtga cccgtgaccg ccgatcgccg ctctgcttgc taacaacaag 180
 ttcatgtagc tgacctgtcc aacatcactg ttggcctaag tacaaaatcc ttgcatttgt 240
 gtggtgcccc tgagactgtc ctacatcagt tcactagtgt acatttgcag aatctctctg 300
 ttttcttgcc aactctgaat aatttccttc tttgaacaaa ananaannnn nnaannaaaa 360
 aaaaaaagcg gccgctct 378

<210> 1530
 <211> 459
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-F11

<400> 1530

ccggtcaaga attccccgggt cgacgggata aagaacttca agcacatccg gatgagctaa 60
ttgaaagttt ctccgtgatg tgggaaacca tgctccagtg ccgctggcgc caacacgcga 120
tcatacaagtc actatcagcg gctgcaaact agaaacacca ttcgactccg agcctcgacg 180
ccaagccgcc ctctttctgt cgatcgagct cggcaaacta tgctcaaacc tccgaaactg 240
gatcgcatcc cgcagggcct acctgggcag cctcaacctg ggccttttcg gaaatttcag 300
tgcagaaata ccttgatctg cagaaaggcg tctgtgcggc taaatacagg cttctgagat 360
aagcttgagg tagtgattac tgcagcctgc ggggtgtactg tactgtatat cggctgggtg 420
aaacactgcg acttcacctt tgtcaatttt ccaagtaca 459

<210> 1531

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-F6

<400> 1531

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tagccacctc aacgcttgag gaaggaagag gtttaatttc caaagcagct gaaacagcat 120
taatcggcac actagcaatt aagctgctat gggtatgttt gcttgcccct acccttatat 180
atatgatattg caaggtaaaa aaatgagcag agagatcagg aatgctgggt cactgtataa 240
ttttgttgca tggtcagcaa cacgtaccag ttgatgcaaa aaaaaaaaaa aaaaaaaaaa 300
aaaaaaaaaa aaaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360
ccccaaaaaa aaaaaaaaaa aaaaaaaaaa aaacgggccc cccaaaa 407

<210> 1532

<211> 456

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-F7

<400> 1532

ggtccagaat tcccgggtcg acggggagga ggagctgtac gaggacgagg acgacgccga 60
 cctccaggag taggggctg cgaggtctgg gttcttctgt gatcgcggtgc gtgctcagtc 120
 gggggctatt tctgatggct ccatgttgct gctactagta gtgtgtgtgt gtgtgtttcg 180
 cgcttgctgg ccccatctt cgggggtgctg tggacttggt gcttgtgtag tttgtctgtg 240
 tcgggttaat tcggtagtca gtttgttgcg cgtgcgttac ggtgaactag aggtcttagt 300
 agcaggtttg caatatggct ggctcattgt ttcttcacat agtttgtgat gattgttggt 360
 gtcaagtgct ccaccacctc gagggaata ttggctttac cagtggactg gatgcatccg 420
 tggatgtgtt acgtgccatg atgtgcagtc ggcac 456

<210> 1533
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-036-Q1-E1-F8
 <400> 1533

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 agtccatgga ttatacgcac tctcatcctt ccaccattgc tagcctctct aatactgcgc 120
 acatttcgcg ggtatcatac acccagata taccttcctc aaaacagcca ccatacctac 180
 ctattatggc atttccatag ccattccgag atatattgcc atgcaactta ccatcgttcc 240
 atttattatg acatgcttca tcattgtcat attgctttgc atgatcatgt agttcacatc 300
 gtattcatgg caaagccacc ttcataattc tttcatacat gtcgctcttg attcattgaa 360
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<210> 1534
 <211> 376
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-G3
 <400> 1534

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 ggcgtccaat gaggccggcg gcgagggcaa gaccggggc cgcataaagg gcagcaaggc 120

gaacaacggc gtggagacgt acaagatcta catcttcaag gtgctgaagc atgtgcaccc 180
 tgacatcggc atctcctcca aggccatgtc catcatgaac tccttcatca acgacatctt 240
 cgagaagctc gccggggagt ccgccaagct ggcccgtac aacaagaagc ccaccatcac 300
 ctcccgggag atccagacct ccgtccgctt cgtcctcccc ggggagctcg ccaagcacgc 360
 cgtctccgan ggcacc 376

<210> 1535
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-G5

<400> 1535

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 tcgtaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaatttaa aaaaaaaaaa aaaaaaaaaa 180
 aaaaaagggg gcccccaaa gggttcaagc ctaatttacc cttgaaggca agttaaacc 240
 cctccaaagg gcccccaaa ttccattcca ggggccttct tttaaaaact tctgacgggg 300
 aaaaccccg ggtttccaa tttaaaccct tttgaaaaaa accccctttt cccaagtggg 360
 gttaatacca aaagggcccg ccgattgcc ctttccaaaa atttgccac cctaaatggc 420
 aaagggaac cccc 434

<210> 1536
 <211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-G9

<400> 1536

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 gtgccaagta gaacctatag gataacttat gatgatagtt gatttgattc tgatgaaaaa 120
 cagaaacttt gcgcgcacga aatttgtttt ttaaatacaca gaaacgtgat tttgtgttta 180
 ttcgttttgc tgctgatcaa tagacaaatt ttccatgact gcctattttg gtagtatttt 240

tagagttcca gaagtttgcg ttagttacag attgctacag actgttctgt ttttgacaga 300
 ttctaacttt cgtgtgttgt ttgcttattt tgatgcatct atggatagta aaatagttta 360
 taaaccatag agaagttgga atacagtagg tttaacacct aagtaaataa agaatgagtt 420
 cat 423

<210> 1537
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-036-Q1-E1-H5
 <400> 1537

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 cgggtcaaagc catcgaatct ctcccagaca gtgacgatga agatgttctg atttcaaggc 120
 gcgctcttat tgatatacaca cagagagtca tcacaaggac aaaatagcat gattatacac 180
 aggggtggaga agataaggcg gagtttcacc acaggtgtag tgttccgctt ggaaattttt 240
 ggtcgccttg gtcattgcat tctttccatt gcccggtttt tgtgtaacat ttgatgagac 300
 ttcagggtaa ccattcctgg gaatcatcct aagtcgcagc tgtagtggtt ttagttactg 360
 gtggcagcag aatctgtgta ttaatatcac gattggcgat tgcacgatga cctgatcata 420
 agactgtaac 430

<210> 1538
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-037-Q1-E1-A1
 <400> 1538

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 tgacttaaag tcaaaagcca gggcggttta tcaaacctcg catatttata taaacaggaa 120
 aacatacctg tagaattgac ttatactgct ggcttacatc accacaggca gtgaaggtaa 180
 caatccaatg atttataagc gcatgatttc aatggcgcaa tccaaaatat aatggcgact 240
 taacgtccaa agccaggcg gtttttcaaa cctcgcatat tcatccaata atataaaaag 300

ggccaattct agttctgccc ctaactcgaa cccaccactc agttttgccc ctaattttca 360
 ggtatgctca gttttgcacc tccgcggtta gtgtcactta tagaaatgcc 410

<210> 1539
 <211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-A7

<400> 1539

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 gcctcgagcg caaccacat gtoccttgccg ttgtcaaacg acatatacga atccacaatg 180
 gagtcatcaa aaacacttag aagagcacct ttaaagagag tatcgatctt ctcgaaagct 240
 tccagctgtg ctgcattaag atcgccctca gtcttgccct tagtggcgtc atagcagcac 300
 atggtctgaa accagtaaac tgccctcgctg cgccacctct tatattggac ccccttaaag 360
 gcggatggct tcaaatgcgc agcgaaacca ctcggagtaa attgcctata atcagggtttt 420
 tgg 423

<210> 1540
 <211> 346
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-A8

<400> 1540

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 gcgaacttgt cttgctagct cactttgatc attgttcacg agatatgggtg attataggggt 120
 cactatctca gcgtagatct ccgtagttgt atggttgacc agtcagacat tccgcatgtg 180
 cctcattagc tcgtgttctt tatcaatcta agggctcacc tgtcaatgga cattgactgt 240
 ataaaaattt atgcatacgt ggggaatcat gccacagact catcgctgca tcgcaccctc 300
 atcagccaca ctcagtggtg aataccttgc gtcagaccct catgct 346

<210> 1541
 <211> 344
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-B11

 <400> 1541

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 cctcaatccg gcagggtataa aaccggccac aacattatat taaggacata tatatatattgc 120
 atgcaatatg aacaaaatgg ggtaaaaata aatcacttac agaacgtacc aactgatgat 180
 agatttgctg agctcgcgca gattgaaaag ctggaacaat tcaactcagat gaatttgcac 240
 atagtaatgt ttgaagtgat gctcatattt aacttccgca taaatatatt ctttggcggtt 300
 tttatTTTTT atgtaaccct tgtaccatTT cagcagacct ttca 344

<210> 1542
 <211> 396
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-037-Q1-E1-B12

 <400> 1542

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 aaccaaggat aatggccttg ctaaaaacca acctaaggct gtgtcggtgg ttgttgttga 120
 aatggcggag gatggtggca aggataaccc actcatcaag gctgcaaatt gccgcatatg 180
 caaggaaaag gacagcatca aaaatctcaa aaaaccatgt acgtgcaacg gcagtctgaa 240
 gtatgctcat aaagcgtgtg tgcaacgctg gtgcaatgag aaaggaaaca ttacatgtga 300
 aatttgccat gagcaatata agcctgngta cacagcnaca ccacgtgttc aaccagatga 360
 gaccagcata gatataagtg ggggattgga cattac 396

<210> 1543
 <211> 292
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-B5

<400> 1543

cctatagtga gtcgtattaa gttttggctg ggggaccatg tgggtggtgaa tgtggacggt 60

ttggcgaaaca ccaaggatga tggccttgct gagaatctat ctgaggctgt gtcagtgggt 120

gttgttgata tggcggatga tgggtggcgag gatgatccac tcatccaatc tgcagagtgc 180

cgcatatgcc acgaagatga cagcatcaag aatctctaga atccatgttc gtgcaacggt 240

actccagaag tatgctcata gagcgtctgt cgcaacgctt gtgcaatcag aa 292

<210> 1544

<211> 188

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-B6

<400> 1544

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agatgcgacg cgggactcgc cgaccgtgag ggtttttata gcaggctggt aagcagtggg 120

atgggggggg atgatacgtc cactttgcgg catgcgtcta gagcgacatg tagtgcatta 180

tgggctgt 188

<210> 1545

<211> 261

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-B7

<400> 1545

gagtcgtatt acaggcgtc cggattggga cttggttctc ctccacgcgg gggcggttta 60

cccttacgac gccgaccatt accctgcgca ttggtattag ccacagaatc tgaactgtta 120

tccgccttac ggcttacgtg tgtttccatg acccgccggg ttatgctgct gccctttggt 180

gctgccgccc ttctttccct ttctgtctt ctcacatca tactcagggg ccttggtact 240

atcgagtcg gcataactca c 261

<210> 1546

<211> 388

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-C12

<400> 1546

gtcgtattaa gggtttattc aggtaaacag aatagcaatt atttcttgac ttaaatgaat 60

aaccatattg caataaaaat aatccaatca gattatgctc aacgcaaaca ccgaataaca 120

tttatttttag gttaaacact aatctagaag gtaaaggag tgtgcgttgg tgatcttata 180

aaccttgga ttaacttcaa cacacatcat catctcgccc tcaactagtc tttgtttaat 240

ttgcaactcc cgttttgagt tactactttt agcaactgaa ccagtatcac atactgaggg 300

gttttctata aacactagta aagtacacat caataacatg tatatcagat atacctttgt 360

tcactttgcc atctgtcatg gttttgtc 388

<210> 1547

<211> 236

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-C3

<400> 1547

caccctatac tgagtcgat tagaggaaca cggtagcggc tcccagagaca ttgaacgac 60

agtgatacga ccttaattac tatgataggg aattatttgc gattccatta cagatccagc 120

ctcatgtgat cacaacaaag ttctggatcc gcagatcaca aatgcccccc aacactcaa 180

tccaatccat ctcacgtctc tgctccacat tgcgcattct tatcgaagtc ccgctg 236

<210> 1548

<211> 368

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-C5

<400> 1548

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aatgaataa ccatattgca ataaaaatga tccaatcata ttatgctcaa cgcatacacc 120

gtataacatt tatttttagt ttaacactaa tccagaaggt aaagggagtg tgcgttggtg 180

atcttataaa ccttgaatt acttccaaca cacatcatca tctcgccctc aactagtctt 240
 tgtttatttt gcaactcccg ttttgagtta ctacttttag caactgaacc agtatcaaatt 300
 actgagggtgt tttctataaa cactagtaaa gtacagatca gtaacatgta gatcaaattag 360
 aactttgg 368

<210> 1549
 <211> 252
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-037-Q1-E1-C6
 <400> 1549

ttactacacc ctatagttag tcgtattaca gtatcaccac ttttccatgg atggttggag 60
 cgctgcgcca ctagatgctc gactcgtgaa ggtgttaggc gatgttcgtc ccattgggaa 120
 tggtgcccgt gggtcgtctc gaggcattgc tgagggatct cagcaggatc ctcagggtgcc 180
 cagaggggtc taagctcgca ttaggactcg ggcattgccgt ctcgtgtcgg ttctattcga 240
 tggcggacgc gg 252

<210> 1550
 <211> 386
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-037-Q1-E1-D11
 <400> 1550

attccctata gtgagtcgta atagggatgc caaacgtgag gtaggccccg gagccgaacg 60
 tgattccaaa ggccaaccga acccggtcct tcaagggcgt ttcttagagc cctggagcat 120
 ttcggctcca acagggcgac ctctctggcc aatgaggtcc ggaagctttg ccgggggtgcc 180
 atgaccaatg tctcaccac ggtggcgtag tggaacccca acctcgactt cgatgccgcg 240
 ctggagagct tgccggagga tgcggacctt ggcacgctcg aggagcgtat caagcccatc 300
 atcagccgcg ggcacggagt tcggagggtg tagggccagc gctgagatta tgcaccccat 360
 ttctcatcgc cgctgcaagt tcttga 386

<210> 1551

<211> 429
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-D2

 <400> 1551

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 gcaagaagaa ggccaagaag agcgtggaga cgtacaagat ctacatcttc aagggtgctga 120
 agcaggtgca gcccgcacatc ggcatctcct ccaaggccat gtccatcatg aactccttca 180
 tcaacgacat cttcgagaag ctgcgccggcg atgccgcaa gctggcgcggt tacaacaaga 240
 agccaacat cactgcccgg gagatccaga cctccgtccg cctcgtcctc cccggcgagc 300
 tcgccaagca cgccgtctcc gagggcacca aggctgtcac caagttcacc tctctttatg 360
 ctgttcgtct tctgtgtct cgtagttagc tgttcgggtg tgtttgtggc cgtgttacc 420
 tgtaagaat 429

<210> 1552
 <211> 422
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-D3

 <400> 1552

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 tgaagttagc aagtcccgta gcatgcacat atggtaaaag ttgtgtaaca aatttgcgc 120
 atgggggtgct cttttgattg ccttccttat gtgtggaggc cgggggagcg cgatgggtta 180
 ctctgcca cctccccctt aggagcatgc gtagtagtac tttgcttcga gggctaatag 240
 aacttttgca ataagtatat gagttcttta tgactaatgt gagtccatgg attatacgca 300
 ctcttacctt tccatcattg ctagcctctt aagtaccgtg cattgccctt tctcaccttg 360
 agagttggtg caaacttcgc cgggtgcatcc aaaccgtga ttogatacgc tctatcacac 420
 at 422

<210> 1553
 <211> 408
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-D7

<400> 1553

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cttgctgtaa aaaacagaaa ctttagcgct caccaggact gctgtcattt ttatttggga 120

agtgtattt agttaattat ttttgcagat gattaataga taaatgtctc acgtccagaa 180

atttatttta gaatttttgg ggttccagat cttgcgctag ctacagatta ctaaagactg 240

ttctgttttt gacagattct gtttttcgtg tgttgtttgc ttattttgat gaatctatgg 300

ctagtaaaat agtttataaa ccatatagaa gttggaatac agtaggtata acaccaatat 360

aaataaataa tgagttcatt acagtacctt gaagtgatcc tttgtttt 408

<210> 1554

<211> 349

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-E1

<400> 1554

ggcacaccct aaagtgagtc gtattaaccc gtgggtaagg taccactaag aagtcogtgc 60

acgatgaaat ctgccgtgac taatctatga cacttgatc tcacgtgga gctaactcac 120

gatggggtca cgatcgtggt cggcaagttc accggaggca aatgagatgt cgtgcggcgc 180

atgaccaata atcttgcgcg aacgatggac accaatcacg tatgatagag tcccgaggac 240

tattcgatct aatatgggta tcgggtcccc gttgatggca tagacgtttc cattgccaat 300

acagcacagc cttctgcaa gccggacact cggacagact tcacccaca 349

<210> 1555

<211> 372

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-E10

<400> 1555

gggtcgaccg gaccaagga cacaatttg atttttgaac caatttatat gcactggagc 60

atgtgcatgt agttcaaatt tgaattatgc acataaatgc aatgaaaact cagttaatgc 120
ataaaaaatgt ccaaacgaac cccgaaaaat cacaaaaatt gacacagcac tcttgtgggtt 180
ctaggttgac accagaaatt ttttgaaagc aaaaaaaggc gatggaaatc ctttccgccc 240
caaaaggggg acatttccca acgaaaacaa caagcctgtt gtgaaaaact ctgggttggtg 300
aaaaacatat acccaaactt gcccacaaatg ggacaaaaaa tttaccaagg catgttgata 360
gcatgccaaag tt 372

<210> 1556
<211> 342
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-E5

<400> 1556

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ggtcggtgat ttgggtggaa ggtgttgccg ctgcggtcgg ggcattgtggg atgtggaagg 180
aggaggacga tgggggtctg gtgtggatta cctgcctgga tagacgaggc cgagcagcat 240
tagcgagggt cactggcgag gaggcggcgc tgcaggcggg gaggtagggg tgcaacttgg 300
ggaggtacgc agaggtaggg gaagggtggc gtgtgaggtc gg 342

<210> 1557
<211> 281
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-E6

<400> 1557

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cgggtatcct cttggtggag atactatata tgtgacaaaa ggcgttgtgt cacgcagtga 120
ggtcagacca gatgcgcatg gaagatcaga tcgtcgtggg gttcacattg atgcagtagt 180
gaaggcagga aacagtcgtg gatcggtttt taatgagcag ggcgaatgcg ttggagtacc 240
atgtgacgtg ttcaggtgag atgaagctga aagtattgga t 281

<210> 1558
 <211> 402
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-E7

<400> 1558

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ggcccaacat attcgagaca tctcccatg ttataaatgc cgtcattggag gctattgagg  180
ggatgtgagt tgctctaggt gcagctgtgg ttctgaatta ttgcctcaa ggccttttcc  240
atccagcaag gaaagtacgt gaagtatatt ggaagatcta taactcgctg tatattggtg  300
cacaagatgc acttgttgc tcttatcccg cactaagcga tgatggagac aatatcttca  360
gccgtccaga gctagccatg tttgtgtgat caatatttac at                               402
  
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<210> 1559
 <211> 397
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-E8

<400> 1559

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cttcatttac tcattttctg agattgaacc acctacgcat gtgttgagac caatatattc  180
caatagtacc acaggattcc taatctctat ccttccccga gttgatttcc actcaaagaa  240
tctttccacc atatccagat ctctgagaga gagttgagtg ttggggagac tatcatttga  300
agcacaagag caaggagttc atcaacaaca cagcatcgat taccttttgg agaatggtgt  360
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<210> 1560
 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-037-Q1-E1-F2

<400> 1560

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ttcaacgtga acacggaggt ccgcaacagc tacctgcagt cactcaagaa gccagaaaag 180
gacctgggtc aggtcatgga gtctgccaag gaagcaatga aagttgttgt agcagagaag 240
atgcgcctct tcggatccgc aggcaaagcc tgaatatagc gatacaatga aaactggagc 300
cagcaacact ccatcattaa gtgttgcattg cccatttttag cgatcctgct angettgtga 360
cagcgaattg ccggaaccag tttcttaata aagcactgat acagttgcct gaagaaatta 420
agttgc 426

<210> 1561
<211> 313
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-F5

<400> 1561

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gggaataacta caggccgata caaggcaaga tggccagtca tgatgtgatc aggtacacaa 120
tttacatcag caatgtgctc gacccagtgc acgcgacat ctgcatctcc tccaatgcc 180
cgtccagcaa caagtccatc atcaagcaca tcacgacaa actcacaggg gactccgcca 240
atctcgcccg ctacaacaaa aatcccatca tcacatagct gtacatccag acctccgctg 300
tctcgtcct ccc 313

<210> 1562
<211> 301
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-F6

<400> 1562

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 tcattgttcg agtggacact gtggacatct taatctatgt ggaacttgcg ggacttggtg 180
 gtctgatgat aatgtatgtg cattagtcac taccactggt ggttcccatt gagatccacg 240
 tccagcggtta ttacatcggt gtggggatat ctgcctgttg acttcatttt ctcggttcgc 300
 a 301

<210> 1563
 <211> 376
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-F7

<400> 1563

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 cagaatgaga tcaatgctac aggacttcag tacgatagga gagacaagaa attccagccc 180
 ttcaatttca acagtaacat cgtgactaac catagagggt tgacattggc ccgcaggggt 240
 gtgtaccact agcggagtgt ttatctcttc gtaatggatg ccatgcagga atgcaaattc 300
 tgctgatatg aatgaatggg atgctcctgt atcagataaa acggatgcgg gtactgaatt 360
 tacgaagagt gtaccc 376

<210> 1564
 <211> 316
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-F8

<400> 1564

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 agcctgccat cgctaaccga gcagcggtag gaggaagggt tgatgtcggg gatgcaatgg 180
 acttgtcaca gtaggtggtt tgtgtggtgg tttgtttggg tacgagtgcc ctttgagatg 240
 acgagcatca cggattcgtt gctctcaca gtttcagcgc atgcgatcca ccagcggagg 300

acggtaatag gaagca 316

<210> 1565
<211> 439
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-037-Q1-E1-G2

<400> 1565

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tccgagagat tggtcgaaca acaagttttc gtatcatgta tccgacgcta ctgggtacat 180
acatgtacaa tatgtataag atctcttaat taaaacccc tagcatttga aatcaacttc 240
cacatggtat tctccggctt tactgatgac gtgatcaaga aagaatcccg ccaattcctc 300
ttgaattgct ttcatgcgat ctgggtctag gagttcattc cgcattctgcc acgtctaatt 360
tgaagaaagg ggctaattaa tacatatata tgaatgaaac tcaacagana tgatggtgta 420
ataaaataaa aatgtgaat 439

<210> 1566
<211> 312
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-G4

<400> 1566

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tctttcgatc tgtatcccat tttgtgctag ccttcttaag gcaacttggt taacttaggt 180
cggtaaccaa atattgttcc ttcggctaac cctccaataa ttaaccactt gtatccaacc 240
ctccaaggcc ccggccttga ataagaatcc ttgaagaact aatttaattg gtaaatttgt 300
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<210> 1567

<211> 399
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-G5

 <400> 1567

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 actcgttttc attaggacag gcaacacggg gttctccatg gatctcaagt caggccatgt 180
 ccgtaaggta tacacctgca ggtcaagaaa ctacgacgtc accgttggtc cctacatgag 240
 cttctgcact ccagatcgtg ctatgggcag actgccatcg ccatgaggac ccaactgtcat 300
 cctgtaacaa ggacctgctg ctcttggtt gttgcataga tgacgctcca agtggtttgc 360
 ttccaagctg gactgtctaa gtagttacca tgggtcaatg 399

<210> 1568
 <211> 340
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-G6

 <400> 1568

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 ctatgagatc ctgaactctc cagaccgtgc ttgcaacctt gccaatcagg catttgatga 180
 agccattgct gagctggact ccctcggcta ggaatcctac acggacagca ccttgatcat 240
 gcaacttctt cgtgacaact tgactctctg gacctccgat aactcagagg aggggtgggtg 300
 atgggatcaa ggaagccgct tcaaattctt gagggagagg 340

<210> 1569
 <211> 330
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-G7

 <400> 1569

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 taacaaatct gcagccctgt tttggtttgg gtttaaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aggaagcaca aaaagataaa 240
 agactaaaat aagcatacat gaaacatcat aacacttcat atagtgtgac caaaattcaa 300
 ttcagggggc gatcatttta caaggtcttg 330

<210> 1570
 <211> 422
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-H1

<400> 1570
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 ggaagctctc acgaacggcc agaccaacct cagggacaag atgatggacc actggaagat 180
 gcacaggagg aatgagaaga tgctggagga ggagcacaag ctgctggctc tgaggatgca 240
 ccagcaggac gacctgagca gcggcatgag ggagatggag ctcggttacc atcagggtag 300
 ggatttcact tcccagatgc cgttcacctt ccggctgcag cccagccacc ccaacttgca 360
 ggaagacaag taggccaccg aatcctgcca cggcctgtgt caactgaagc tcctctacct 420
 gc 422

<210> 1571
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-H9

<400> 1571
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 cagatgctga catcgtgttg ttactaaaaa tattgaagtc ttggccttca cagatgatgt 180

ttccagttgt tgattttctg atggtgtttg tgttgcatcc tgacggggct actttacgtc 240
 ttaagaccat cgaaagtgga aacgatgtag ccatggaaac cttccgtaag gctgtagcaa 300
 tacctgtgca ctcaccgaat gtgcttacia tcctcaaagc agttactaac ttatttgaca 360
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<210> 1572
 <211> 475
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-B10
 <400> 1572

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 aagaagggcg tggagacgta caagatctac gtcttcaagg tgctcaagca ggtgcacccg 180
 gacatcggca tctcctccaa ggccatgtcc atcatgaact ccttcagcaa cgacatcttc 240
 gagaagctcg ccggggagtc cgccaagctc gcccgctaca acaagaagcc caccatcacg 300
 tcccgggaga tccagacctc cgctcgcttc gtctccccg gcgagctcgc caatcacgcc 360
 gtctctgagg gcaccaaggc cgtcaccaag ttcacctcat cctatgctag tctgccgtgt 420
 ccgtgaactg atggctgcat tctgtatgta gtttagcagt accatgttac aacct 475

<210> 1573
 <211> 371
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-C7
 <400> 1573

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 ttgttggtgt tgttggtggt gttgttggtg ttgttggtgt tgttggtgat gttgttggtg 180
 gtagttgttg ttgttggtat ttagttgta gttgttggtg ttgttggtgt tgttggtggt 240
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gttgttgttg ttgttgttgt tgttattgat gttattgttg ttgttattgt tgttgttgtt 360
gttgttgttg t 371

<210> 1574
<211> 472
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-D12

<400> 1574

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tattctaaat ttatgataac agcacctatt tttatatattt agttctatga tatcatgcga 180
agttatcctc ttcataccca caacgtagtt ttatttctcg gttctagatg gaagcaaacg 240
tttggtgtat gtagagtcac atcagtggca gataggactt gagagaacat tgatcttacc 300
tttagctcct tgtgggttcg aactccata cttatcactt ccacctttgg aaatttctat 360
gatgattcct tgcacttagg gattatcact atccaacatg catcttaaag tattaatgtg 420
gagatattat atattatctt caccctgcac tcgaaggaca aatacacaa ca 472

<210> 1575
<211> 347
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-D8

<400> 1575

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attgttgaac catatctatt cctcatccgt gactactgtt cagtcatact gtggctgttt 180
ggctccaatt ttggaagtca attttgtttg tctgagacat cttggaaaga acagtgtgaa 240
aatgagctct aaaagatcaa agcttacata aaagtggacg ctctataaga tctaagctta 300
cgtatccgtg catgccactt catagctctt cgatattgtc acccaaa 347

<210> 1576

<211> 281
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-038-Q1-E1-D9

 <400> 1576

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 cgccggaatc gaagtgagca gaggcggcgg ccatggcggc aatggggggc acagagagct 120
 ccgggagctc gggctagtgg tcaaggaggg gaagaggagg gtggtgaggc tgtggtgtgc 180
 tcgancgagg caggggatgg ctatttatag ccggggcgag agggatgggc tcgggtgctg 240
 tcgtgcgcat ccggccgaca cccgagctcg gcctcgctcg c 281

<210> 1577
 <211> 470
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-038-Q1-E1-E10

 <400> 1577

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 aagctgcac agttcgcggt gaagccgcca atgggtaata tgagtaagct agtttggact 180
 gtctcgctcg ccaaccgca gggccgtagt cgagttcacc ctttggata cttatagctt 240
 taactatggg acagtcttgg tcatcggagc taggttcata tagtttctgt tgcttggcta 300
 gctcgacaag ggatagtcga tgtgagggaa ccgtgggcga attctgcgcc atctctatac 360
 aagaaaaata tacgtgtgtt ggtacagtta caagccatgt tcaaacagc aaaaacaagt 420
 gaccatggta aatgaatgga aattttacca cggaggcaat agtccgagcg 470

<210> 1578
 <211> 485
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-038-Q1-E1-E2

 <400> 1578

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cagcaatcct tgagtacctt actgccgagg tccttgagct ggccggcaac gctagcaagg 180
atctcaaggt gaagcgtatc acccctcgcc acctgcagct tgcgatccgt ggagatgagg 240
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agtcactcat caacaagacc tccaaggagt gaatgaaatg caataacggg tagttgttgt 360
gtgttgtatc ttctgatcc ctgtgttatgt tgtgctatct gttacgtgtt gctattatca 420
caacctgaat aggttgtctg aatttgtgat tgggctagct ttcggtaact tgttattacg 480
taaag 485

<210> 1579
<211> 455
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-038-Q1-E1-E8
<400> 1579

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nagcttgtga tccttgctaa caactgccct ccgctccgca agtctgagat tgagtactat 180
gctatgttgg cgaagatcac tgtccaccac taccatggaa acaatgttga tttgggaact 240
gcgtgtggta aatacttccg agtctgctgc ctgagtatca tcgacctgg cgattccgac 300
atcatcaacg caacaccagc tggccagtaa acctgtgtat gccattttca gtgtctcgtc 360
tgatgogtca tctaagggtg ttctagagtg tagttcttgc tggacttgat ttgggtcttgt 420
gtacatcatt tatcagtcaa tcaagtttga tggga 455

<210> 1580
<211> 456
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-038-Q1-E1-G10

<400> 1580

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gttgaagtgc tatacaacct ctgtcacact ctccaggaga tctgcgaagg cctctgcaga 120
atgccacagt tgggtgagct tgatgcaccc tttgcagcca aacacacact acaataaata 180
tggcttacct gcgggtatct gctccacttg ctggtgcacg tcacagtcgg cccggggccac 240
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gacccacgct aggtccttct ctcaaccacc ttcttgcaa cttgggcctt ctctgccttc 420
gcggccgcaa ccttttgctg ctccacctcc taccga 456

<210> 1581

<211> 457

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-G5

<400> 1581

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atggtaattt gatttggtta taaatttcaa atactaagag aagttggatg cttgatagtt 120
gttttgagat ataaagggtg taatattaga ggtgtgctag ttgagtaatt gtgaaattga 180
gaaatacttg tgttgaagtt tgcaagtccc gttgcatgca cgtatggtaa acgttatgtg 240
aaaaatttga agcatgaggt gttctttgat tactttcctt atgagtgggtg gtcgtggacg 300
agcgetacca atctaccccc ccccccaagg agaatgcgcg tagtgcttgg ttttgatgac 360
ttgtagattt ttgcaataag tatgtgagtt ctctatgaca aatgttgagt ccatggatta 420
tacgcactct cacccttcca tcattgctag cgccttc 457

<210> 1582

<211> 482

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-038-Q1-E1-H11

<400> 1582

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 atgattgggt gccctgagcc tcgaagtga taaatgataa gttcatgggt ctaataacgg 360
 ggcaaagtct catccatgct agagtaatct tgattagtaa tagcaggagt ctacgtgggt 420
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<210> 1583
 <211> 474
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
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 <400> 1583

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 agtgtttgac atgggttttc atcttaggcc aggcaaaca acaattaatt cgacgataag 180
 tgactgggaa cccggagtga ctgccatag cactgtctgt gaaggctgcc atgatttgtt 240
 gcagaagaga agtcaaccgg cccaacaaaa tctggccacg gaaacacagg ataccttgtt 300
 gtaaggaaaa ccgcccttg gggctctgtc ggatagctag tcgagtaagt aattttctgcg 360
 ctcgaggatt gctctttag ctgttcagtt catcttccaa ccaggctggc tgacaaacag 420
 atacaagggt caatgtctct gtcgtggac ctctcgaaag agcatctgcc gctg 474

<210> 1584
 <211> 445
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-F11

<400> 1584

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cttaatggcc gtgagtacct atctcactac gcttacatct cctcttttgt ggttaccgat 240
gctttactac tgtctactca gtgcatgcat gcacgcatga tttcgacact gttatggccg 300
cttgatcatg tatttggttt gtttttataa ttttggtcga tgattgctgc gtctgcgtaa 360
tggtttctct atatattttt caagcactct gtaatacacg tatggccgta ttgaattgac 420
catggtttgg tgggtgtgga acgat 445

<210> 1585

<211> 139

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-F2

<400> 1585

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caccaaattc attcacggg 139

<210> 1586

<211> 371

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-F6

<400> 1586

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gttgctgttg ctgttcttgc tggtgttggt gtttgcgtgt gctgttggtg ctgttggttg 180
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tgttgctgtc gttgttactg ttgttggtgt tgttggtgtt gttgatgttg ttgttggtgt 360
agttgttggt g 371

<210> 1587
<211> 408
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-F9

<400> 1587

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caaccttgcc tgcgagatgt acagcttgaa ggcgtgttct cctggcatcg atcatggaag 180
catggagtgc tgttgctgc ttagttgttt ttgctgagt ggttaaatgg aactatgtaa 240
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tctccgtatg tatgtgtttg ggaatagagt tcttgaccac tagtactatt gtgtgtgtgt 360
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<210> 1588
<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-A1

<400> 1588

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<210> 1589

<211> 423
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-040-Q1-E1-A8

 <400> 1589

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<210> 1590
 <211> 404
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-040-Q1-E1-A9

 <400> 1590

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agtatgatcg tgttgtacat gaggacggca agatctgtgt gaccatcttt ttcaacacct  180
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<210> 1591
 <211> 398
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
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<400> 1591

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<210> 1592
 <211> 389
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-B7

<400> 1592

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 tcttcccttc cgagcagatt cgtcgctcgc gtcctctacc ggttaccgc gaccgtcccc 240
 taagctaggg ttctggccac cgcgtgcgc gcgtggctcc ggcggctcag atcgagcacg 300
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<210> 1593
 <211> 374
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-B8

<400> 1593

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gtccgctcca gtgaccggcc tgtcaacggc gaccgacgcc ttggtattct ggtgcttcgg 240
ctttgttcgt cgctgtgtt aaggccaatg tttttgtgaa catgatttgg ccatgacacc 300
ggaatcttac cccccaaat taataatggc caaccaaggc tttccatttt ttctggctctg 360
gaaccctaa atta 374

<210> 1594
<211> 445
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-C11

<400> 1594
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ggcaagaaga aggccaagaa gagcgtggag acgtacaaga tctacatctt caaggtgctg 120
aagcaggttc accccgacat cggcatctcc tccaaggcca tgtccatcat gaactccttc 180
atcaacgaca tcttcgagaa gtcgcccggc gaggccgcca agctggcgcg gtacaacaag 240
aagcccacca tcacgtcccg ggagatccag acctccgtcc gcctcgtcct ccccggcgag 300
ctcgccaagc acgccgtctc cgagggcacc aaggccgtca ccaagttcac ctctcgtag 360
agtgtcctg ctctgtgtc togtanttag ctgtccgggt gtgtttgtgg ccgtgtaatc 420
gtgtaagaat cgcaccgtga tgttt 445

<210> 1595
<211> 306
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-040-Q1-E1-C12

<400> 1595
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aacgatttca cgttctgatg tagaagatct agatcctcaa cgtgctgatg tatgttcttt 120

gctagatcga catctcgtcc atcgatcatat caagcattaa gtcgttcatg atggatatca 180
 tcgagaacct caccagcggt gtcattggtg ttttttcgta agcaccgaat ctagtatcag 240
 atcataggag attaaatctc cgtgcttggt catctttccc ggtaatttcc ccaactacgt 300
 attctc 306

<210> 1596
 <211> 450
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-040-Q1-E1-C2

<400> 1596

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 cctcgtaccg gtacctctgg actagcgctg tggctggaga gattgccacc cttgcattct 180
 atgtgttcac tgggtacagg ttccggcctg aggtgcacaa cccatacttt gcgattgatg 240
 atgatgagga agaggctgca gctgaagcac tcaagttgga tgatgaattt gagctatgag 300
 tactataatt tggcggccta ttccctgccg gtgctacaca ggtgttatat gtgcttctac 360
 aggacaagtg cttttcacaa gacanatgcg atagactggt atctagtcca tacccttttg 420
 tttttcattt gaagttagtt aacattttgc 450

<210> 1597
 <211> 407
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-C6

<400> 1597

gggtccacgg gcggagcaga agaaggagat ggccactatt gctgtcggct ggcagggtggg 60
 ccagcagacg acggtggcaa caaccaatg gaggacgagg cggcgccacc ctccctgcgg 120
 gtgcatgcgg acctcccat cggcgagtcc cgtgcgcact acacggacat gccacaggag 180
 gaggaggagg ccaagttcca gcaggcgtag gccgaccagg cctactacct ccgcctcctc 240

gaggagcccc ggcggtgcgga ggagctgctc accgcccga catccatcat gcctgacgtg 300
gacgtgcccc agcaggagac gttgctcgag tcctaccgct ccgcacgcga gattcgtcac 360
gaccgctggt ggtaccgcca acgtcaggcg gagttagaag ccgccta 407

<210> 1598
<211> 292
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-C7

<400> 1598

tgggtgggtggt ggtgggtggtg gtggtgggtgt tgatgggtgtt ggtgggtgtg gtggcggttgt 60
tggaatttgt gttgttgttg ttgttgttgt tgttgttgtt gtgggtgttgg tgttgttgtt 120
gttgttgttg ctggtgttgt tgttgttgtc gttgttgtcgt ttgttgttgc tgttgttatt 180
gctgttgcgt ttgctattgc tgtcgggtgtt gttgttgttg ttgttgttgt tgttgttgtt 240
gttgttgttg ttgttgttgt tgttgttgtt gttgttgttg tcgttgtcgt cg 292

<210> 1599
<211> 412
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-D1

<400> 1599

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ccaccatcac ctccaggag atccagacct ccgtccgcct cgtcctcccc ggggagctcg 120
ccaagcacgc cgtctccgag ggcaccaagg ccgtcaccaa gttcacatcc tcctagactg 180
acggcggtgca gttggtttct gcatctgcat ctgtactctt gactctgctt atctatctat 240
ctgcaagtag tgggtgggtg agtagtacct gtgctgggtg attgccaacg ctttgttggc 300
ccgttggttg taagagctga agttgctgct ttggcaaact gaaatctatc tagaactgaa 360
gttgtggtcc taaaaaaaaa aannaannaa aaaaaaaaaa agcggccgct ct 412

<210> 1600
<211> 408

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-040-Q1-E1-D11

 <400> 1600

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 actgactggg actcctctag gcgtcggaca cgctatcaaa ctcttcatcc aagagatcgc 120
 cttcgtcaac atctggccaa atcaacaagc caggtgagta ctatgaaagt actcgcaagg 180
 cagttcggac ataagatata acaaatgcaa acatgaagca tatgaacaag ttaaccagtg 240
 cgatcagaca tagagataat aaatactgga tgccaagcga gggctctgaat gacgcctcga 300
 gcggaaactg cagaatagta atactggtgc caaacgagtg tctgaaagac tctcgcagcg 360
 gaaaatgcgg agtaataata caggtgtcaa acgagtgtct gaaagact 408

<210> 1601
 <211> 218
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-040-Q1-E1-D12

 <400> 1601

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 catggcgagc ttgagcgtgc ggccaacgac agcaaacaga cgggaaaaga tgtctaagag 120
 gtagagttag gcgagcgaac ttgtctggta gaaggaattt ggaggggggtg ctcacctacg 180
 gcgacggttg gcgaaaaaca gtagagatgg ggctgtat 218

<210> 1602
 <211> 432
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-040-Q1-E1-D6

 <400> 1602

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 gtttgcataat gtttgcttgt ttaatgattc tatttttagga taggagtatt aaatatgcag 120

aggcatttta gtatgcaatt ttgaataata attttagtga tttgttacag tagataatga 180
 taaggttatt gcgttgattt atactaactt atctcacgag ttcttggtga gttttgtgtg 240
 gatgaagttt ttaagatgta gggaagccgt aatataaaag gaattaagga gacacaaaag 300
 ctcaagcttg gggattccca aggcacccca agataatatt tcaataagtc tcaagcatcc 360
 aagcttgggg atgccccggg aggcacnca cctttcttct tcaacaatta tcggtcagta 420
 tcggttgagc ct 432

<210> 1603
 <211> 401
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-D8

<400> 1603

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 acagtcatca tgtagaagat gcaggacatg atgatgagga agatgccgga gcagacgacg 120
 ggcatgatca tgaagatgat gatgccggcg gagcagacga cgctggacca tcgatgggct 180
 gggtgcagga ccctcatatt caagagctgc ttctcaagca gacggataac gcaagagctg 240
 ccgccccgaga gaatgccaaag atggatcaac ttgagttaga cgcggttact ccattgtatg 300
 aaggatgcag gcctgaggat acccgctga aagtaacgct catggctctg gagatgaagg 360
 taaaacacaa aatgaccgac gtatgcttcg atgagaacat g 401

<210> 1604
 <211> 299
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-E1

<400> 1604

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 atcaatacga actaaatata ataagaaagc acgatagcgg gagagccacc caacaagcac 120
 cgcggccacg ccgcccctctt ccggactccc ctctctccct cgccctgcgg ccaacatggc 180
 cagccacct tcgttcgacc tcccgtctct ccatgccctc cagccaccgc ggccaggaat 240

gacacgtcac cctcgtccag catccccctct ctcccctcgcc tccaccttcc tatgtcatt 299

<210> 1605

<211> 454

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-E6

<400> 1605

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cacctctgtc aagtggatc caatttccag gttgctcggg gagattttac agctttttgt 120
agtttagatc gactctgttc ttcataccta tagctcacia aaaagccaaa aaaattaggg 180
ttcgttcatc ctatccgaac caatctgagc ctttgcataa tcttttctgt atttgctttg 240
ttgaatttgc ggttgcata tcgtgtcaag ttgctcgtct tagcgtctag tccttttagag 300
tttcgagttc tgttcatagg ttgtcatgtc gccgctgcca tatatcacia ccgcatcatc 360
atcatcgatg ctgccatata ccacctccgc accaacttca tcgccgctgc catataccac 420
caccacatat tagtcgcat cacaccaatc tgag 454

<210> 1606

<211> 442

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-F1

<400> 1606

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aatttctgga cgtgaggaat ttacctatta atcatcttca aaaataatta actaaatata 120
actctccaat gaaaaatggc agcaaatact atgagcgcta aagtttctgt ttttttacag 180
caagatcaca aagactttcc ccaagtcttc ccaaagggtc tacttggcac aaacactaat 240
taaaagcata aaaccacatc taaacagagg ctagatgaat tatttattgc taacctctat 300
tatcacgcaa ctttcaccgg taccataaac ccaccatata ctttctcaa aacagccacc 360
atacctacct attatggcat ttccacagcc attccgagat atattgcat gcaactttcc 420
accattctgt tagtatgaca cg 442

<210> 1607
 <211> 269
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-G7

<400> 1607

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 gttcagtctg tgtgctgtgt agtggttcgtc tgaatgagcg cagttaacgt gttctgtcta 120
 attgtcgatg taacctgtgt tgtgatggaa gaaatccaag tgtagttgaa acttggttctt 180
 atgcaatacc ggccgatcta aaggatccaa acttacgtac ccttgcatgt catctcatat 240
 gtcattctaaa tcgtcatcca aattcaatt 269

<210> 1608
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-H7

<400> 1608

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 aggcgatcgg tgtcttcgag agcgtgcagc cgtcagacac cgacctcggc gccaaaggcgc 120
 ccaaggatgt caagatccag ggtgtgtggt acgcgcagct cgagtctaac tagagcagag 180
 cagaagtga gatactcatc ttgtgtgcat gcgtacgtgg gttgatcggg ggagaggaaa 240
 caatcgaggc aacaaatgtg tttgtgtgtg tatctagtaa tctaaacca ggggtgtcgg 300
 ttatatttta gcttctgtta ttattgtttc ttcttgaca actcatgata ttgatcccc 360
 atgaatgttc acaaaattct ttgttgataa aaaaataaaa aatgataatc aaaaaaagc 420
 ggccgctcta gaggattcaa gc 442

<210> 1609
 <211> 380
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-A10

<400> 1609

aggtaccagt caagaattcc cgggtcgacg ggagtgccaa ccaaggggtc aactccgggg 60
aagatgagaa gagggaaacct ggtcctcctg gagcagcagc ggccagtgtt aatggattcc 120
aagaaagcgg cgtggaggag cacaacctgc ctgacagccc ctttgcattt cccacataga 180
cgaatgatgc tgctgtgtgt tcttctcttg caaaaccagc ccacgttgtt accatcattg 240
gcaacaatag cagccctcat ctgggtggct cgtctctgtt cctcctatg ccaactgccc 300
ttgagctgcc cccatacaaa tctgtcttct tccaagtgcc caggttctct cctggccatg 360
gatccatcgg gctgtaaata 380

<210> 1610

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-A11

<400> 1610

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tagttgacat cgtattttgtg gcaaagccac cgatcataat tctttcatat atgtcactct 120
tgattcattg cacatcccgg tacaccgccg gaggcattca tatagagtca tttttgttct 180
taagtattga tttgtaattc ttgagttgta agtaaaaaag aagtgtgatg atcatcatta 240
ttagagcatt gtcccagtga ggaaaggatg atggagacta tgattcccca caagtcggga 300
tgagactccg gacgaaaaat aaaaaaaaaag aggccaaaag aaaaaaggcc caaaaaaaaa 360
aaaattaaaa aaaaaaaaaa aagcggccgc tctaaaggat tcaagct 407

<210> 1611

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-A2

<400> 1611

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caccttatgt ggaaaaggct gaacagaaga agaaggacta tgagaagacc aaagccacct 120

ttgataacaa ggagagtgcg agctccaaga aggccaagac tcagaacgat gaggaggtca 180
aatctgaggt cgaagatgag ggtagcgatg aggaaaacga ggacgatgat gagtaaataag 240
tgtatcagag tatgaggtat caaattgggt gttgggtccc cgcttagtgt actagtttgc 300
tatactgcta tcctcagtgt tagatgatga gatttggaag tacatgttgt gtttgtgtgt 360
taagggggcc cttttaaacg tgtggactca tggtttgaga a 401

<210> 1612
<211> 406
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-A5

<400> 1612

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gtgagattcg cagacctgtc tatcttcgga ggtgtgacat catcaaaaca attccagact 180
tttggttgac agcgtttcta agtcactctc ttctcagtga gcttttgact gaagaggatc 240
aaaagatgtt caagtacttg gaatctgttg atgttgatga ctctaaagat gtcaagtcag 300
gctactccat cactcttaac ttctctgaga atccgtactt tgaagacaga aagcttacca 360
agccatatgc ctttgctgat gatggaacaa ccacaataaa tgccac 406

<210> 1613
<211> 459
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-A7

<400> 1613

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ccataataat ttgtatgtat ataagagaaa tctgtcataa acaaaaggga tttcaccttt 120
acacagttaa taaaaagaa tgacctaaaa tcaaatgcct ctagattaaa caaaaatcga 180
gaacagaatt gttcacccat cagcatgaaa ggaatggtgt gctttatata gaaaggaatg 240
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atcgagattg gtcattcata tttcatctat gatctgtaaa tagtcgaaaa agaaattcca 360
 cttcaagatg aaaaacacaa tagcatgggt attgaattgc aagatgggcc ttgtttcaaa 420
 actaaatcac atcccaatgg tggtaatggt ttcccttta 459

<210> 1614
 <211> 381
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-B11

<400> 1614

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 agctgagcag agtcaatgcc t 381

<210> 1615
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-B12

<400> 1615

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 ggccaccgac ggcgcccgcc gaccgaagat gttccttctg gactgggttct acgggggtgt 180
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 cggcaagacc acgctcctcc acatgctcaa ggacgagagg ttgggttcagc atcagcctac 300
 acagtatcca acttctgaag agctgagcat cggaaagatc aagttcaagg catttgattt 360
 aggaggccat cagattgccc gccgtgtgtg gaaggattac tatg 404

<210> 1616
 <211> 450
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-041-Q1-E1-B2

 <400> 1616

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tgttacatac ttgaccttc tgtgtatttt tctcatttca aattaagcca tattaatcag   180
aaaggacgca gtatggacta ctactactag tactagtact gctttgatgt gtcccgtaa   240
ctcgccgaac gaggagaagc ttgcttacta cgctctccc tcgccacgc acgcggtggt   300
tcgcaggacg aggagagggt ttgactaca gcacctctc cctctccctc accctcgccc   360
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<210> 1617
 <211> 360
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-041-Q1-E1-B5

 <400> 1617

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tgcattgcaa ttgcaactct gagctgctgc gaatgttcca actgatgagg tttatgcatt   180
ttgaacttta tagtaatgct atttgcatgc cttcatgaat aaagaactca caaaacaaaa   240
atacaatcaa aaaaataaaa acctgactaa tattaataaaa cggacgccct agaggatcca   300
atcttaagta cacgtgcatg cgatctcata acccttctaa atcgtcacca aaattcaatt   360
  
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<210> 1618
 <211> 439
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-B7

<400> 1618

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ggacaccttc ttggtctcag gtggagctgc cattgccttc tttcgcttgc cgggtggagct 180
cgacggtgcy tcctcgacgg tagcgcagca ctccgaagag gtgcgcttgc cggagtgggc 240
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cttgcgttct gctgcggctg ctgcttcccg gtagatcttg tcggcacaga taagagcatc 360
cttcttgctg ccagggacag agatgacact tattgggcct ggcattttca gtacgttgta 420
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<210> 1619

<211> 423

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-041-Q1-E1-C1

<400> 1619

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acgagaagca caagtccatg tgctacagcc tccatgtcca tgcctccct ttcttcaggt 180
tctacagggg agcccagggc agggctcagca gcttcagctg cacaaatgca accatcaaga 240
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ggc 423

<210> 1620

<211> 370

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-C10

<400> 1620

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tcatcttcgg ctactcatct cctgggttacg tcttctacgt ctttccgaaa attgaagtaa 180
acggaaatgt aaagctaaaa ctaaaactat ggctaaaact aaaacgaaat cgaaggtaaa 240
catagaccga aactaaaaa tacagattgt aaggaaaaaa cgaaatctaa agctaaaact 300
aaagtaaaac taaagctaaa tgtaaaacta aacctaaaac taaaattaaa aggaaatcga 360
aactagacat 370

<210> 1621

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-C3

<400> 1621

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ccgacaccac caccaacgag agcatgctct gcctctacag cctctacaag caggccaccg 120
tcggggcccgt caacacagcc cgccccggaa tgttcgacct taagggaag gccaaagtggg 180
acgcctggaa gtccgtcgaa gcgaaatcca aggaggaggc gatggcggac tacatcacca 240
aggatgaagca gctgctcgag gaggtgccc cgcacatccg ttcttcctag gccacagaac 300
ctacttttat ccatgggtgt gcagacatat gtgccaataa acacaaataa atttgaagtg 360
ctatctgtct aagcttatcg tcgtattggg tgtaattacg ttgaacaagc cccgcctgtg 420
atatttgaat ttacgccaat gatgaatc 448

<210> 1622

<211> 462

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-C4

<400> 1622

cgggccgtaa aatccgggtc gacgggagag cttaaatagt agagttggga aatccaaaac 60
 agtggatgct cctgaaaagc cacgaatgag ctcagatgac gttgacaagt ttaggaggag 120
 aagatgcttg gtttggtgat ctatgatatg acgtctgcac agttcatgga gtagtttccg 180
 aacaccatgg aatgggattc aagcaactgt gtcatagtgt atagcgagga acgacgctga 240
 cagttcccg c agtagaggga taatagctgt gttaaagtgt ggagaagaag aatcatgacg 300
 ctggtgaata agctgttatt tatcaaaaga ggttacgtct caacatggta actttctcgg 360
 ttaattaacc tgtatcgcaa cccccagtgg cggtaggatt tccatcatgt aaaagtgttg 420
 tctgtaatca ccagggacaa cgatagaaca tttgctgcca cc 462

<210> 1623
 <211> 429
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-C5
 <400> 1623

gtaccggacc taaattcccg ggtcgacggg gttgaatgaa tccattgtga gaagagccct 60
 tgtgatcatg caccagaggg acgaagtgga gtacaagagg gagcgccatg tgattgtccg 120
 caaggcttga gctgaaccaa aatgatggaa ctaccatgga aaccctctgg ccctctgatg 180
 tgtgtgtata agtagtgctg aactgcagc ctgtttcctg aggaaatttg ttgcgtcggt 240
 gaaattgagt tgtagttgta ctactttaag ctgtagctgt agccctaaat tatcttgtgt 300
 cgaactgaag atgtaccaca gtaagttcat tctgtattgc aacatttggg cgttctgcag 360
 ctgagcagag ttaatgccta tgaaaccgaa aaaaaaaaaac gggagaaaga aaaaaaagc 420
 ggccgctct 429

<210> 1624
 <211> 397
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-C9
 <400> 1624

aggtaccgag tctagaattc ccgggccgac ggggggagac gagggtttct gcgctcgaac 60

aacccgggac ccggcggcga ggaagagaga gcggcggaga tggcgggtgat ggacacggcg 120
 ttcaaggcgc tgacggcggg gctgggcgtg gcgacgtctt acctggccgg ctctttctcc 180
 ttcaacgtct accgcggcct cgctggcac tccgagcaat ccaagctaga aaaagaaaat 240
 gagaagagcc aagattgaga gggaaggacg gcaagttagt gtcggacatt accaatcaaa 300
 aggatctgca agaaatctca tcttttgatg atgagtggtc attcgtgggt gattttcgga 360
 cagttccttt gatgtaatat agattcaggg atttgga 397

<210> 1625
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-D12

<400> 1625

ggtaccgagt caggaattcc cgggtcgacg ggtttggagc tctagtcttc tcaggcttca 60
 tcgtctacga caccgagaac ttgataaagc gccacactta tgacgagtac atctgggcgt 120
 ctgttgagct ttacctgac attctcaacc tgttcctgac catcctacag atgctcaggc 180
 agaatgacaa ctgatgggtc ctgtctgaac caccaggaac cctgtgcaa cccaggcata 240
 tgtcctacat ttatcaagtc ttttgaattg ctatctacat aactcggaag acatggtagt 300
 gagtttttgc catcatccag agatgaggcc aaagtacaac catatgtata ggcgttctat 360
 tgtgagttta tgtgcctgag tgttgagtgt tgttaaactg ccaacaatca gtgatcgtat 420
 gaaccgtttt aatgcc 436

<210> 1626
 <211> 452
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-D2

<400> 1626

ggtccgaaat acccgggtcg acggggctgg agttaatttt ggctttcccg cgagggtgata 60
 agttttgtta tgtcctaagg ctaatgtttc cctgcactaa caatgcagct aaatatgcgg 120
 cttgattcca tggcctcagg atggctaaaag agatgaacct aagctgggtc aggtgttttg 180

gcgattaaga tctagtggcc cagcaattct caggaacttg ggattccaag gacccgctca 240
 ttgtggctta togetgggcg gttgatgata ttgttgggca tttcaagggt tatcagggtgg 300
 aacatattgg togcaggaaa aaaatgacgc ggctgatgct ttaagccgggt tggggctctca 360
 gcgtaagcca atgccaccta atgtctttct tgatgttctg agtaatcctt cagtttaatt 420
 gcctacacaa gaggatcttg ctatccctga cc 452

<210> 1627
 <211> 471
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-D5
 <400> 1627

taccggacca gaattcccgg gtcgaçggga agccaaagggt atctgtaccg aacgggtgtca 60
 atggagagaa acagcaggat gccgtcaatg ggaagccaaa gtcgcctgtg gcgaatgggtg 120
 ttaacgggga tgcgaagggt ccggcagaga aagccgctgc caccgctgct cctccggccg 180
 ttacctacgc ggcgaagggt gcccaaacag cagcggccga gaagaagcct gtggcgaccg 240
 agaagaagcc tgttgtcgcc aacgggtgctg tcaagaccgg agtagctgct tgatcgcatt 300
 acccgatcct cccagctagc catgaagaac aaacggacgg tgctggcgaa ccaggcgaga 360
 catgcggggt ccaaggtagt gatcatcaaa ggtggcgtct ggaaagcggg tcggatagtt 420
 aggtttccct agctctctcc tttttcttct tctgtcgtcg tcgtactatc a 471

<210> 1628
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-D8
 <400> 1628

ttcccggggtc gacggggggc taacaggcga tgaaggggag caagagtgat cttccagctg 60
 ttgatcgagc cgtctctcca gtcactaacc tctcccaagg cttcccccca gccctgctg 120
 atatattgac aacatttttc accaatggaa atggagtctc atcatagagc aatagctgta 180
 tacatacatg tttatagcct gtatctaatag tcccagcagc cagccatcac ccccccatga 240

gcctaggagc cttcttttttc tttcttatta atctagagat ccttttttttg tttaacctaa 300
 tcggacatga agcttcctca agcttggtttt tcattggctc ttgctaaggt ttgggtcaagt 360
 tgtcagctcc aacatgtggt agctatgaac ttatgatgat g 401

<210> 1629
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-D9
 <400> 1629

ggtagcggtc aggaattccc gggtcgacgg gatcttcagc cccatcaacg aatcagtaac 60
 cgcttacttc cctcatcag caatatagtg cctgcaaagt ttcgaccaac tgggtccatct 120
 gttgttaggc aggatttttt gctcgggtga agctagcagt ttaccacttc aaatttagag 180
 tcttgaatct caaggcatgt gagaactgag tttgggtctc catttagtac agttgaaaat 240
 gtttgttttg gctgtgtggc aatgccgtag cgtgtttgat aattaggtgc aacttttaag 300
 atgactgaat gccttgctg attgtttttt tacctctgtt gttatcattg ctctaaattt 360
 taggtctgct cacgctgcat atcttataag ttttgtattg tctgtagtat ttctcaatca 420
 agatgttcga aggaa 435

<210> 1630
 <211> 393
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-E10
 <400> 1630

aggtaccgag tcaggaattc ccgggtcgac caggctgaga aaatgggact tgactacatg 60
 gatgttgaaa gtctcaagaa gatgaacaag aacaagaagc ttgttaagaa gctagccaag 120
 aagtaccatg ctttcttggc atcagaggcc ataatacagc agatccctcg tctccttggc 180
 cctgggtctta acaaggcagg caagtttccc actctgggtta gtcaccagga atctcttgaa 240
 gccaaaggtca acgagacaaa agctacagtc aagttccagc taaagaaggt tctttgcatg 300
 ggtgttgctg tgggcaactt gtcgatggac gagaagcaga tccaacaaaa catccaaatg 360

agtgtcaact tccttgtgtc cctcctgaag aag

393

<210> 1631

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-E11

<400> 1631

agggtaccgag tcaggaattc ccgggtcgac gggatatacta catgcatata tggctggtgg 60
aaagctctat gattacaatt tttgcatcaa gccaattttc cctactgcaa aggaataaat 120
ttttatttaa ctatcatggg agttgttaaa cattgagaag atagacatcc tctcaatcct 180
aattaaacat catcattaaa tcccaacaaa attaattaga gtaacatgat gagattcaca 240
tgctaatecca attatccaag tactagatac tcaagacgtc cataactggg gacacggcta 300
accatgatta gtttatacac tctgcagagg tttgcgcact tttaccata agactcgatc 360
tcctccattg tattttctcg cactacatga tgtttgagaa a 401

<210> 1632

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-E12

<400> 1632

agggtaccagt ctagaattcc cgggcccagc ggttcccgat tagtacaggt gagggctagc 60
aaaagactgg gaagcgacca actagagagc gacaacagcc atgtacatgc attaaaatta 120
ataaacattg gatgcaagca tgagtaggat ataatccacc atgaacataa atatcgtgaa 180
ggctatgttg attttgtttc aactacatgc gtgaacatgt gccaaagtcaa gtcattcaaa 240
agaggatacc accccatcat accacatcat aaccatctta atagcatgtt ggcacacaag 300
gtaaatcatt ataactcata gctaataaag catggcacaa gcaactctga tctctaattg 360
tcattgcaaa catgtttatt cataataagc taataaagaa cgcgggactc atcatattta 420
caaaaacaaa ag 432

<210> 1633

<211> 110
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-041-Q1-E1-E2

 <400> 1633

 tcaaaagaag gcggtcgctc cagacgatcc aagcatacgt acgcgtgaca tgcgacgtca 60
 gagctcttcg aaagtgtcac ctaagttcaa atcactgggc gtcgggtttac 110

<210> 1634
 <211> 390
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-041-Q1-E1-E3

 <400> 1634

 gggtcgacct ccaccaaagc gatatccatc atctcatcga aagatcggga ccctcgctc 60
 tatcaagtgg tatcagatct ccaggttgct cgggtgagatt ttacagtttt tcgtagttta 120
 gatcgagtct gttcttcata cctagagtcc acgaaaaagc caaaaaaaaaa tttaggggta 180
 gttcatccca tccgaaccaa tctgagcctt gcataatcgt ttctgtatct gctttgttga 240
 atttgcgggt gcacgcgtcgt gttcagttgc tgggtcatatc gtctattctt ttacagtttc 300
 gagttctgtt cacaagttgt cacgcgctcg ccgcacatc atcatcgcgt ctaacagcta 360
 ccaacaacgt tcagaatccg taaccatata 390

<210> 1635
 <211> 464
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-041-Q1-E1-E4

 <400> 1635

 cgggtccgaaa atcccgggtc gacgggcata ggaagagagt tagacttcgt tggtgcatgc 60
 tatatgttac tttgtgctca ccactaaatc acaaatcatt gttaattaaa attggctttg 120
 atataccttg ggatccgggt ggatctatta cttgagcact atatgcctag cttaatggcg 180
 ttaaagaaag cgctgccagg gagacaaccc ggaagtttta gagagtcatt tattttctgtt 240

gagtgcctttc atatagttta aaaacaaaat aaaataaaga ggggaacca aaacttttca 300
 aaaaggaaag tgaaagtgag agagacaatc attgttgaag tgggggagct ccttgaactt 360
 tgttcatgct cacggaaact ttgtgaatct tgattacaga aatttttcaa caaaaataat 420
 tatccccttg tacaattaca ttgtactaga caaataatgt gcca 464

<210> 1636
 <211> 454
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-E7
 <400> 1636

taccggacct aaattcccgg gtcgacggga agaagcccaa ggcggagaag cggctgccgg 60
 cggggaagtc cgccgccaag gagggcggcg acaacaacgg caagaagaag gccagaaga 120
 gcgcggagac gtacaagatc tacatcttca aggtgctgaa gcaggttcac cccgacatcg 180
 gcatctcttc caaggccatg tccatcatga actccttcat caacgacatc gtcgagaagc 240
 tcgccggcga ggccgccaag ctggcgcggt acaacaagaa gccaccatc acgtcccggg 300
 agatccagac ctccgtccgc ctggtcatcc ccggcgagct cgccaagcac gccgtctcgc 360
 aaggcaccaa ggccgtcacc aagttcacct cctcgtacag tgctcctgct cctgtgtctc 420
 gtagttacct gtccgggtgt gtctgtggcc gtgt 454

<210> 1637
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-F10
 <400> 1637

aggtagcagt caggaattcc cgggtcgacg ggcccgttca cgtccatctt cctcatcgtc 60
 tactgcttcc tgccggcgct gtcgctcttc tcggggcagt tcacgtcaa ggagctggac 120
 gtgaccttcc tcacctacct gctggtgac accctgacgc tgtgcatgct ggcggtgctg 180
 gagatcaagt ggtcgggcat caacctggag gagtggtgga ggaacgagca gttctggctc 240
 atcggcggca ccagcgcgca cctggccgcc gtgctgcagg ggctcctcaa ggtgatcgcc 300

ggcatcgaga tctccttcac gctcacctcc aagtcgggcg ccgacgacga gaacgacgag 360
 ttcgccgacc tctacatcgt caagtggacg tcgctcatga tcccccccat cgtcatcat 419

<210> 1638
 <211> 392
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-F11
 <400> 1638

caggtaccga tctggaattc ccgggtcgac gggggtgagg acggtgacga gggcgatgag 60
 tactagagcc tgcctcctgg tgctttccca aggcatgctg ctgcaatcct atgatctgcc 120
 cgagtggctt tatctgttat ctgtctgttt gaacatttgc tttgtggtgt ttgttttaca 180
 acctgttggtg ttgtaagaac cttgtatggt tgaacctgtt atgcaccttg gttaatatgc 240
 atgctatctg gttatctaca ccatagcctc taaaaaaaaa aaaacaaaaa aaaaataaaa 300
 aaaaaaaaaa taaaaaaaaa aaaaaaaaaa aaaatcaaaa aaaaaggaaa aaaaaaaaaa 360
 aatacaaaaa aaaaaaagcg gcgcacctaa ag 392

<210> 1639
 <211> 408
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-F12
 <400> 1639

ggtaccagtc tagaattccc gggccgacgg gtatggtaga cattggagca tgtgcttgta 60
 gttcaaattt gaattatgca cattaatatgc ccagaaactc aattaatgta taaaaaaggc 120
 gaaacgaacg cggaataatt ccaaaattta gcacgatact tctatttggg ctaatctgcc 180
 tgtgcaaaaa aacttaaggc gggagaaggc agtgtacgta tgtcgtttcg cacatggagg 240
 tgacacgtcc cctctcgga ctagtagcct tcttgaggga agtcccggtt tgcaagaagc 300
 ttacacaaaa gcctgtccca attcagccaa aaaattcacc acaacatggt ggtgccatgt 360
 catgagacca tgccaagttt catgattttc aagcgtgttt tggattta 408

<210> 1640

<211> 403
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-041-Q1-E1-F5

<400> 1640

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 caaggagatc gcgaggatcg acgccgccgg cgtccagcgc cacgcggcga gcatcaagca 120
 aatcacccgat ctccgcgacca aggtcatcgg ctacacggag gctgtggcga cgaagaaata 180
 cgagaagacg gtcgagggtta ngcagacgtc cctcaagggtc cctttgctgg tgctcgccgc 240
 cgctggtcat cgggtcaact tcaactgtct tgatccacta ccccggaagg accgccgtga 300
 ccgacaaggc caagaacctg gtgaataaga agaccgctga gatcaagatg tccttgaggg 360
 acaacctgat gaagatcctg acagaggacg accaggtggg cat 403

<210> 1641
 <211> 464
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-F6

<400> 1641

ctgcagtacc ggaccagaat tcccgggtcg acgggcaaca atgaccaaga ttattaagga 60
 gatgctaccg cctgatgttc gagtagcaag agatacacia gatcttcttg ttgaatgctg 120
 tgtagagttc atcaatcttc tttcttcgga atccaatgac gtgtgcagcc gggacgacaa 180
 gaagactatt gttcctgaac atgttattag ggctctgcag gatcttggct tcaaggagta 240
 cgttgaagaa gtttatgcag cctacgaaca gcacaagctt gaaactctgg actctccaaa 300
 agcaaccaag ttcactggta tagagatgac tgaagaagaa gctgttgctg aacagcagag 360
 aatgtttgct gaagcccag caaggatgaa caatggagct gccaaaccaa aggagcctgc 420
 attagaacca cagaatcaac cccaacagcc ccacaaacct caac 464

<210> 1642
 <211> 392
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-F9

<400> 1642

ggtaccgagt ctagaattcc egggtcgacg ggggcagcac ctgctggaaa ggcggcccag 60
actgcggcgg cgccaagtt gccgacaaaa tctgctcccc cggcgcaggc tgggagggat 120
gcgaggagcg gaggcccacc atcacgtgga ggatttggcc gtggtgaacc tggccgcggc 180
agagggtggcg gccgatacgg ccagaaccgt gactttggca gtgagaacac gaatggctac 240
cagggaggtt atggtggggg aggttctgga gatggcgctg taactggagg cggggatggg 300
gagagaggcc ctcgaccata ccgtggaggc ggtggtagac gtggtggtta ccgcaacggt 360
gagtttggtg atgactctga gagaccacct cg 392

<210> 1643

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-G1

<400> 1643

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ccaccatttg gcggatgcac ttcgacagct caaagatgcg caccagtttg ggagccggca 120
ttgtcctcgc ctctctcaaa ggcgacaagc tcaagcacac gccgcaaatt cactttgccg 180
cctccaacaa cgtggccgag tacgaagcgc tcatacacgg actctggctg gccaaaggaga 240
ttggcatccg ccgatttcta tgctatggcg actcggactt ggtgctccat cagtcgtcag 300
gcgactaggt cgccaaggat gcaaacaatg cgagctaccg cttcctcgtc tagcagatca 360
gtggacactt caacgggtgc gagttcctcc atgtgccatg ggccgacaac gagcaagctg 420
atgccct 427

<210> 1644

<211> 389

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-G10

<400> 1644

gtaccagtct agaattcccg ggccgacggg gaagacaccc gcgggcaaga agccaaggc 60
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 ccggggccgc aagaagggca gcaaggcgaa gaagggcgtg gagacgtaca agatctacat 180
 cttcaaggtg ctgaagcagg tgcacctga catcggcate tctccaagg ccatgtccat 240
 catgaactcc ttcatcaacg acatcttga gaagctcgcc ggggagtccg ccaagctggc 300
 ccgctacaac aagaagccca ccatcacctc ccgggagatc cagacctccg tccgcctcgt 360
 cctccccggg gagctcgcca agcacgccg 389

<210> 1645
 <211> 394
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-G11
 <400> 1645

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 aagggaaga agaaggccaa gaagggcgtg gagacgtaca agatctacat cttcaaggtg 120
 ctcaagcagg tgcaccgga cgtcggcate tctccaagg ccatgtccat catgaactcc 180
 ttcatcaacg acatcttga gaagctcgcc ggcgagtccg ccaagctggc gcgatacaac 240
 aagaagccca ccatcacgtc ccgggagatc cagacctccg tccgcctcgt cctccccggc 300
 gagctcgcca agcacgccg ctccgagggc accaaggccg tcaccaagtt cacatcatca 360
 taggtttcgt cgtctgtttc atggattgat ggcg 394

<210> 1646
 <211> 362
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-G12
 <400> 1646

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 aagtttacc tgtggtgtgt gtgtgtcctt gcgagactat ttcggctctc tgtctggtct 180

ctgcgacttg gtagcttctc atgggctcca tgggtgttga tgatgtggag ggaggagggt 240
 tcgtgttagc taagttagtc cactccctct gttcgtgttt tgtaagttaa ttagtagtat 300
 gtgtgctact agtatatgga actttaaatc ggttcaaaaa aaaattaaaa acaacgtaaa 360
 at 362

<210> 1647
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-G4
 <400> 1647

gggccgaaat acccggtcg acgggcctta tctttctttc ataaaaagga atgaatggct 60
 cggctagatg gaataaccga gccagaacag aaaaaaagta gaacaggat aaataagaaa 120
 atcttagtta agagggttca tgtaaagaac aggttccaaa tcacgatcga ttcccttttc 180
 aaaacctgct gcagcagctc gggctcttcc tgcattccat aaatggccca caaaaaagaa 240
 gaatcctaga acaaaatgag aagttgataa ccaacttcta ggagagacat aattaactgc 300
 attgatctcg gtagctacgc caccacgga atttaaagag cctaaaggag cgtgggtcat 360
 atattctgct gagcgtcggt cttgccagg ttgtatgtct tttttcaacc tactcaagtc 420
 caaacggtg gggcccct 438

<210> 1648
 <211> 433
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-041-Q1-E1-G8
 <400> 1648

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 gaaagctctt agatgatgaa aagagacccg atatcacgaa acgaccacac actcctattg 120
 gagatgaggt ggaatgcaag aagccaaaga tagcagaagg ctcaagggtc caaggagaag 180
 aacctgaggc tggagggata aagaattcct cctgggtctg atgacagggg aatgcagtaa 240

acaccagaag catcaaaact atgatctgga acagtatcct gaataaacta ttttctggat 300
tatgaatgaa ttctgaagca tggggctata agtgaattat gtaacatgga tttgtaacta 360
tgggtggatgt taagttaacg ttctatcagt acaaaaanaaa aaaaaaaaaa aaaaaaaaaa 420
aagcgggccgc tct 433

<210> 1649
<211> 393
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-G9

<400> 1649

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cattgaggtt tgtgattccc gtagcatgca cgtatgggga accgttatgt gacgaagtcg 180
aagcatgatt tatttattga ttgtcttctt tatgagtggc ggtcggggac gagcaatggg 240
cttttcttac caatctatcc ccttaggggc acgtgtagta gtactttgct tcgtgggcta 300
ataaactttt gcaataagta tatgagttct ttacgactac tgtgagtcca tggattatac 360
gcagtctcac cttccatca ttgctagcct cct . 393

<210> 1650
<211> 334
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-H1

<400> 1650

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gattttttaa gttccagagc tagtcgaaag ttacaaattg ctacaaagtg ttctttatct 120
gacagattca gatctttcgt gtgttgattg ctgagtttca cgaatctatg agcactacca 180
gggggtatca accatagaca cttcatcta tatcatgttc aacaccatca tcgataaatc 240
atgcattcag tacagtacct tatgtgggtg attatcattc ctgcactaat ggagcttacg 300
atatttcccg tctacttctg tgatctcaaa tttt 334

<210> 1651
 <211> 388
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-H10

<400> 1651

gtaccagtca tgaattcccg ggccgactgg cagaggaaga caatcgaaag gggacataat 60
 gatcagatgc agttcgactc tagatataac gtacaagggtc taacagggtgg gagtcaaaaa 120
 tgaagatacc aacaacttgg ttatcgagct gtcaggcgcc ctcaattctc gggacgggta 180
 ctaaataac agatctgttg agatatgtgg gatattgtgt gaattaatga cacgtgacat 240
 cattgtgggt tactacaaat cgagaagatg atgccatggc gggttatgag tgctcacaca 300
 aataaagaag ggaagatatt ttctaaatgt tgaagattga catgaaccag ttcaaataca 360
 catgggtcct aatgttgagg atataact 388

<210> 1652
 <211> 326
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-H12

<400> 1652

gacggggata gtaagccact ttcattgcta taacgctgac caaagccatg gacacaagat 60
 ccaacatgac gatcagtaaa gcttgactat gtacgaccgc atgcttctgt aggacatgca 120
 tgategatcc gtgcccgaac caagttgatt ctcatctctc atctctcaac ttgatgcttc 180
 actagtattg attactcagt acttatctgg aaatcctagc attgacgata tatcaagcag 240
 gttgctcatc tagagcaaac tgggcattac ttaaccgtaa aggataatca ggttggtccat 300
 cttcatccct cgaattgcat gggcca 326

<210> 1653
 <211> 373
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-H6

<400> 1653

attccccgggt cgacggggag aagaagaaat ccagcgagaa catcaaggtc atctacgccc 60
gcgccaagca gtacgccgag gactacgatg cccaggacaa ggagttgggt cagcttaagc 120
gtgaggccccg gatgaagggt gggttttatg tcagtcttga ggccaagctg ctgtttgttg 180
tcagaatcag aggtatcaat gccatgcacc caaagaccaa gaagatcttg cagctgttgc 240
gtttgaggca gatattcaat ggagtgttcc tgaagggtta caaggccacc atcaacatgc 300
tccgcaagggt cgagccatat gttgcatatg ggtacccgaa cctgaagagt gtgagggagt 360
tgatctacaa gag 373

<210> 1654

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-H8

<400> 1654

attccccgggt cgacgggaac ccactatctc ggatttcaag gaatttgatt atgataattt 60
ttcttttagaa ggttgatatt ccttggtgca atccgttggt aattctcctc atgcttatag 120
tcaaaataaaa gcttttacca aacatattgt tgggtgccttg atgcaatctt atgatgaaaa 180
acttaatttg gaagtttcta tacctagaaa acttaatgat gagtgggaac ctactataaa 240
gattagaatt aaagatcatg agtggtttgc tttgtgtgat ttgggtgcta gtgtttccac 300
gattcctaaa actttatgtg atattctagg tttccatgat cttgatgatt gctctttaaa 360
tttgcacctt gcagattcca ccattaaaaa gcaatgggaa ggatcaatga tgttctcaat 420
tgttggaata gaaatttggt gcccg 445

<210> 1655

<211> 375

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-A11

<400> 1655

ccgggtcgac ggggagtcta gtcttttaga gtttcgagtt ctggtcataa gttgtcacgc 60

cgccgcccga ccatcatcat cgccccctgcc atctatcacc accgctccga atccgtatcc 120
 atataccacc accaatccgt gtccatatac caccaccgat ccatatccat atactaccac 180
 caccgctgcc atataccatc accatatatc taccaccaat ccgagttcct tgattactag 240
 gggtgttttc gagatccatc tagttttcaa ttcgtgtttc cttgccggag tcaggtagcc 300
 acgctccgtt taggccc aaa atttttcgaa aacgcatttt tcgaaaaatt ttccagctat 360
 cctactttta agtgt 375

<210> 1656
 <211> 403
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-A12

<400> 1656

caggcacccg tccagaaatc ccgggtcgac gggaatgtta ctgtctactg atacgtctcc 60
 aacgtatcta taatttatga agtattcatg ctattatatt atccatctta gatgttttat 120
 atgcatttat atgctatttt atatgatttt tgggactaac ctattaacct agagcccagt 180
 gccagtttgt gttttttcct tggtttttgag ttttacagaa aaggaatacc aaacggagtc 240
 caattgacct gccaatTTTT gttgattttt tatggaccaa aagaagcccc tggagcaaaa 300
 gagttggggc agaagagtcc cgggctgtcc acganggtgg gggcgcgccc tccccctgg 360
 gcgtggggcc ctgcctcatg gacgactcgg agacccccct gac 403

<210> 1657
 <211> 449
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-A2

<400> 1657

accggtccag aattcncggg tcgacgggga caacatcaac aacaagctgc agcttgtcat 60
 gaagagcggc aagtacacgc tcggctacaa gaccgtcctc aggaccctca ggaactccaa 120
 ggcaaagctt gtgacccctg ctaacaactg cctccactc cgcaagtctg agattgagta 180

ctatgctatg ttggcgaaga tcactgtcca ccactaccat ggaaacaatg ttgatttggg 240
aactgcgtgt ggtaaatact tccgagtctg ctgcctgagt atcatcgacc ctggcgattc 300
cgacatcatc aacgcaacac cagctggcca gtaaacctgt gcatgccatt ttcagtgtct 360
cgtctgatgc cattttcttg ctggacttga tttggtcttg tgtacatcat ttatcagtca 420
atcaagtttg atgggactat ggtttttcc 449

<210> 1658
<211> 389
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-042-Q1-E1-A3
<400> 1658

cgggtcgacg ggggactaca cctacaacac actgggtcaa aatgcagtgc caccgcagtg 60
agaagcttat gtgcgacagg tgatgaagga agagcatgca tggctttggtt ggaagcacct 120
gtgcagcata tttgtagtat ctgggtatat tccatgggtg aatgcgcact atataatttg 180
tgcattccagc caatctcgaa ctcatgttac atagttccat cattagtgaa gatcatgtat 240
gtgtgaccct ggctggctag ttggaaagga cttgttgtca acatttcggtt ggatgtttgt 300
taagctagct ggtgatagca gtttatgatg taaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360
aagcggccgc tctagaggat ccaagctta 389

<210> 1659
<211> 449
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-042-Q1-E1-A4
<400> 1659

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tagtgaaaac agtcataact ggttacgaga aggagggagg gttatatcgg gagcatgtct 120
gcgagagaga cacctcggga gagagtgcgt gagcatgtgc gagagaccac cgatggagag 180
tgaaactaca cataaaatac tgatgtacgc attgattaaa gatataaatt gtatccaaat 240
attaggatgg gatcatgata ttcgcaattc gcgtaaggaa cggtcattga tccattagac 300

atctagatta tatcgaattt gagcatgtct atgtcattat tcgacataat tgatccacat 360
 agttagtatt ttgaactcca gacaatgcat cgcttttagca atcgagtata aacatgagta 420
 tagttcatgt tgtgtgtata nagcacatt 449

<210> 1660
 <211> 303
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-A5
 <400> 1660

gtacggacca gaattcgagg gtcgacgggg agttccaaga gtttagtcaa catgtcaggt 60
 gacatatgga tgccaatggt gactgtcagt aagatggact ttgtgctcgt caggatatat 120
 gaccgtcctc cctgggtctgt caaagcaggg tgtatatcct gtgatcattt tggaaacgca 180
 tatattacta caaaaactac catgaaatat actttcgttc atgctatata ttggagcctg 240
 agatagtgca gagtgatggg aatgcagtgt cagtcacaca gaggccgctg aacggcacct 300
 atc 303

<210> 1661
 <211> 464
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-A6
 <400> 1661

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 aatgctatgg ggatcaatat gggttagggt gcggaaggct atggtggttt tgcggaagtt 120
 atggcggaag ccctaggcaa agatgccaaa gtgccaaaat ttgatggagt aaaatggcgt 180
 tgaaacctat ctagatggat agaggatgtc aatagctact caacgagcta aagaacgcga 240
 aaatcagact ccggatgtga aagttacgac caaaacgggt aaacaccgaa ggctgaaatg 300
 ccaggggccg gacatccggg ggtggggggc ggatatccgg ggtcagtgtt cagaaccatg 360
 cagatttggt gctccaggag ccggattgat gaggacatga ctaccttga tatgaacaaa 420

aatattgcat ataagcatat ttgtcanggt gattctagtg caaa

464

<210> 1662

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-A8

<400> 1662

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cgatacactg tcatcttagg aagtacaatc gcgtcacatt gttggtgtag gcacacataa 120
cactggttct aagcacctta aatgatagca ctatttatgc tacacacgta tgggcaatat 180
tcttgatgtg gccaccgtgc ccctatgtat ttaccttcat gtagaatctc ttgatgattc 240
aagtcaagct tcagctgaag ctcccggggg gaagaagaag acagcgtecg gtctaaacga 300
tgaaacctaa tctagccatc gaagctatct cgaatgccgt ccaaactttc atcacgcttc 360
atctagctcg acgtcctttt acaacatcat gattgcaact ccaactoga 408

<210> 1663

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-B1

<400> 1663

gggtcgacgg gagtgctgga ggtgggtcaaa gttctctggg ttacctgttt ggagatggtg 60
agcctgcaaa gcctgctgca gcaccagctg cgaagccagc acctgctgag aaaccagcac 120
tggcagctgc cgatgtaacc aagcagattc cagctggcat tccaggtagc cgggcgaaca 180
actactaccg tgcagatggc cagaacacgg gcaacttcct tacggaccgt ccttcaacca 240
aggttcatgc tgctcccggc ggtggctcgt ccctgggcta cttgtttggc gggaagtgat 300
ctctgttaat gatgctgcga tgaattggcc tgtatctctg ttatccatgt ggtgaaaact 360
ggaagtgttt ggtttcagca gtttaccacc tgcgtcgatg tact 404

<210> 1664

<211> 397

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-B11

<400> 1664

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tagcaagtgg cggggggcga cgggaggga ggaggaagaa gaaggcgaga tcggctgtgc 120

aattatttgg cggtttgtct ttagtttctt ttgcgattct ttcccttggt taagtttacc 180

ctgtagtggtg tgtgtgtgtc cttgcgagac tatttcggct ctctgtctgg tctctgcgac 240

ttggtagctt ctcatgggct ccatgggtgt ggatgatgtg gatggaggag ggttcgtgtt 300

agctaagtta gtccactccc tctgttcgtg ttttgtaagt taattagtag tatgtgtgct 360

actagtatat gggacttta atcggttcac cggcgat 397

<210> 1665

<211> 358

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-B12

<400> 1665

gggtccagaat tccccgggtc acgggaagat caagaggta tggctttgtt tccttcagga 60

atcaacagga tgcacagagt gccataaatg acttaaattg tcaatggctt gggaatcggc 120

agattcgttg caactgggca acaaaagggtg ccaacagtgg cgaggaccag ctaacatcag 180

attcgaaaag tatagctgat gtaaataacg attttacaga aaatgcaaag cagaagtcaa 240

atgaagatgc tcctgaaaat aatccactgt acagaactgt ttatgttggg aaccttgctc 300

acgaggttac tcaagacgtg cttcatcggt tcttccatgc acttggtgct ggagccat 358

<210> 1666

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-B2

<400> 1666

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tcaacacact cataagaaag tttttactag ttttcaatac ctagcatatt aggattatatt 120
aagaaaatta ccttgctgtt ttaagactct caaaataatc taagtgaagc atgagagaat 180
aatagtttct ataaaacaaa accaccaccg tgctctaaaa gatataagtg aagtactaga 240
gcaaaaacta tataactcaa aagatataag tgaagcacat agagtattcc aataatttcc 300
gaatcatgtg tctctctcaa aatgtgtgta cagcaaggat gattgtggta aactaaaaag 360
aaaagactca aatcatacaa gacgctccaa gcaaaacaca tatcatgtgg tgaattaaaa 420

<210> 1667
<211> 443
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-B3

<400> 1667

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cctcgtgtgg ccgagaagtg agcgggggga tatggtacgc gcgagctacc aaggaagatg 120
gcgcggggcgg gcgagcagtg agtgagggta aatggtgtga ggccgacgat ggggaagaga 180
ggaggaagaa gaagagagga ggaagaagag tggaagacgg ggaagaaagt gcattaaatc 240
tcaattctac tagtactact accaggatat accggacttc ggagtgtaaa tagttactcc 300
gatgacatgt gggcttacca caagagggtc catatgtcaa ttaatggagg acagagggtgc 360
gtaggcgtat ttgcggaagc gtgctctact ggcaaacatg atggcagtac taggttacgc 420
tgatttagta acaccaacac act 443

<210> 1668
<211> 394
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-B4

<400> 1668

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gcgctgatgg tgaaagtacc accagtgccg ccctccttgg cggacacett cttggtctca 120
gggtggagctg ccattgcctt cttacgcttg ccggtggagc tcgatggtgc gtcctcgaca 180

gtagcgcaac actccgaaga ggtgcgcttg cgggagtggg catcagagct cttgccggac 240
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 gctgcttccc ggtagatctt gtcggcacag ataagagcat cctttttgtc accagtgaca 360
 aagatgacac ttatcgggcc atgcattttc agta 394

<210> 1669
 <211> 465
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-B6

<400> 1669

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 gaaggagaag agacaacatg tttgatgaga gagcaggaaa aacatggatg agaggggaat 120
 gatctcgtgg gttgagggat tgacaatttt gtgcggggga gagacggatt ggtaattttg 180
 tgcaagagag agagagaggg tggggggagg agtcagtcag cggttgtcac atcacctgc 240
 ttccaaatga ccccgcatte tctagtgcgg tgtggtcacc gtctttgatc tgctcgttgt 300
 cctctttgaa gattgaggtg ttgtgcatgt tggggtgcaa agaagcacia gcgagagtgg 360
 tcgccgtata accttgatg gggatgaatt gtgtgctcgg gggagtgtgt gtgtgttgtg 420
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<210> 1670
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-B7

<400> 1670

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 gtggtgattt tctttattat actaacggat cttaccgagt tttatgttga agttttgtgt 120
 ggatgtagtg tctaactcag gatgtttcga tgcgagaaga aggaagagag gcaagagctc 180
 aagcttgggg atgcccaggg caccccaagt aaatattcaa ggagtctcaa gcgtctaagc 240
 ttgggggatgc tggggaggca tcccctcttt cttcaacaag tatcggtatg ttttcggatt 300

<210> 1673
 <211> 377
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-042-Q1-E1-C12

 <400> 1673

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gacgatggag gacctgaggc aggccaaaaa tcaggtgagc tgcttgctgc cctgacttgc  120
attttcgcat gttggcattg atagaaacgg ggccactgaa ccgtttgtga tggtttgcag  180
gtcgccgcga gtttcgccgc ggagggcgct gtcatgaacg agctgaagca gtggaacgac  240
ctctacggcg aaggaggggc gaggaagaag gagcagctga cctacttttt gtagaaccgg  300
aaggatggtg gatgtgtcgt gttgggcaaa tcgctgaagc cttggcagag catgagcata  360
catatgtggg tgggaaa                                     377
  
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<210> 1674
 <211> 389
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-042-Q1-E1-C3

 <400> 1674

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caagaatgct ggtgtcaatg gcagtgttgt taccgagaag gttctttcta acgacaactt  120
caagttcggc tacaacgctg ccaactgggca gtacgaggac ttgatggctg ctggtatcat  180
cgaccccaact aaggtggtga gatgttgctt ggagcatgcc gcgtcggtgg ccaagacctt  240
cctgacgtcg gacgtcgtgg tcgttgagat caaggagccc gaggccgcgc ccctcgccaa  300
cccatggat aactccggct ttggatactg atgagcaaca caggccgagt ttctcctgag  360
gacgtggttt aaatttttgg tagcatgaa                                     389
  
```

<210> 1675
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-C5

<400> 1675

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ttctatccag gcacagcaca gctggtcggt agatacctat gctagagcct agagcctaga 120
gcaatgcccg tctgcttctg ctgacttctc tegcctgggtg ctgggtggtga actgatgatc 180
gctactggcc atgcgtgatc cctaacctgt gtcctgccag gtgcccgaac aatcacgtac 240
gtacgtgcta ctctcgcgta ggacctgtac cgcgcgatgcc gttccctcgc tattgcgcaa 300
cagcagagtt tttggctgca catgtcactg atataaaagt tgccctcgta ttgcgcaaca 360
gcagagtttt tggctgcaca tgctactgat ataaaagttg ttcgttccgt tgcc 414

<210> 1676

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-C6

<400> 1676

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agtctttgat ttttagttta ccacaatcat ccttgatgca cacacctttt tggagaagcc 120
tatttgatta taatttgta gaatactcta tgtgcttcac ttatatcttt tgagcttgat 180
agtttttgct ctagtgttc acttatatct tttagagcac ggtggtgtct taattttgaa 240
gaaattgcta gtctctcatg cttcacttat attattttga gagtgtttta gaacagcatg 300
gtattttcta tgatcataaa attggctcta gaatgatgag catccaagtt gggataata 360
caaactatca tagaaagtca attggatgct atgataaatt tatgcctgat aattgttttg 420
agatatgg 428

<210> 1677

<211> 449

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-D1

<400> 1677

cgggtccagca atccccgggtc gacggggggcc tctaaaaaaa aaaaatatcc gttctcctac 60
 ccgtgagctc gtggccttcc caaagcgctc gtcactttcc ccaatttggc cggacggcag 120
 cctccaaatc tccgattcgt cgtcgctttt gcctccggcc aacaccacca cttctcggcg 180
 gctcgccctc tccgtgtcca gttaatcact gctcgteccc aactcgtaga agccacagct 240
 cgcctcccct ctgccatgga cgacatggca cacgcgcgac gccggcggtc gatttccttc 300
 gatgcctagg ttgcgcctc tatctccact tcgtccgttc ttgcataggc tttgtacggc 360
 tttggtagtc agcccgccgg agcccaaaat aaggacacgg acatcggtct cgctgcgtc 420
 gtcgtcaagc gcaagctcct ggtggatgc 449

<210> 1678
 <211> 253
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-D10
 <400> 1678

cgggtcaagat atccccgggtc gacgggaaag agcttaactt ttttactctg aatttgaccg 60
 gtgatgtgtg tgtatatatg ctacatgctg cttttcaaaa gaccctgaca tgactaatgg 120
 tgggtcctaa gatggctgag actgtttctg gatgtttgtt ccgacaatgt tgttgaatta 180
 gtatgtgata aacaacgttt accttctact aaaacaaaaa ctaattacaa aaaaaagaaa 240
 aaatattatt tac 253

<210> 1679
 <211> 316
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-D11
 <400> 1679

cgggtctagaa atccccgggtc gacgggggta ggaagaagtg ggggtggtgt gtcatgggct 60
 ccaagtcgca agcgaagacc aaggccaggg aaaggcttat cgcaaaggac gctgcgcagc 120
 ggatgaacta agtttagcat tgttgaacca tatctattcc tcatccttga gtagtgttca 180
 agcatactgt ggctgttttg ctccagtttt ggcagtcatt tttgtttgtc tgagacatct 240

tggaaagaac agtgtaagaa tgaagtatct ctgtttaatg ccagttagta tttttgtcga 300
ataaaatccg ttgatg 316

<210> 1680
<211> 350
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-D12

<400> 1680

caggcaccgg tcaagatatc ccgggtcgac gggggagaac tctacaagaa aagctctacc 60
ggagtacttc aaagatatat ctctgatgaa gaaggcggc atctcttggc tcgtacttct 120
ctgctttgat acctgcgggc ctgttggtga taaaattcgg aacgagcttt cgcaatgtcg 180
cgcttctcct ccagggcacg taatctatcc tgccgatcaa gctcgggtctc tctactccaca 240
cacatgtcca atctatgtca attcttttga attgctaacg atataactcg gtctacatgg 300
tactgaattt ttgccagcat ccagagatga tgctgattgg gcgtagtcgg 350

<210> 1681
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-D3

<400> 1681

gggtcgacgg ggagcgtcac cccattcagc aatggtggca tgaagcgtgc gaaaacaggc 60
cagtagggaa ggagccaccc ctcatcggtta ccggtattgt ccaggtgcct tatgtgcccc 120
ccaatgggga cgccatgtct ccgggcaacg tttgccgagg gcgcacttga aggaagcgac 180
gccctgcatt tcgctagacg agtcagtatg agtctgcggc ctctcctgcg gacaaggaga 240
agccgctggg acagtggaag tagtagagtc ctgggtcggc gggtcggccc agctttgggt 300
gctgtaaggc cctagaacat tcgctttatt tgttaattga ctgttaaccc tagtaatgtg 360
gtgctatgat ggtaggtgat ctccatgaca gacagactat agaggcccga gtatgtgagc 420
tttc 424

<210> 1682
 <211> 391
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-D4

<400> 1682

gggtcgacgg ggacggcaac agccctcacg tcgattgagg ttgcttagga ataggctctg 60
 gaagagaaag aactttgggc ttcagtttca aagattgtgc acttgccctgc gatacctcac 120
 gcaaaaccat caggctttct tgtctcttag ttttcaggac ctaacaattt gtggatcatc 180
 attgttaata agcttatggg ctgggagccg cgaaacagac atccgagaga tgaaaactgg 240
 ttgacattgt cgggtgtgtat attgttgcac tgtatgtata agtggatctc atcaccaagt 300
 agtgggtgatg aaatggcgcc tgtgtggctg tgtactcgaa agtcgaaatg cagttccaga 360
 tttcatttga aatgtctgcc ttcgtgtgtg c 391

<210> 1683
 <211> 379
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-D5

<400> 1683

cctgcaggta ccggaccaga attcgcgggg cgacggggag gatgaatacc aggattaacg 60
 cgaagaccaa gccaccacg aggactaaac atgacgagcg aagcgagtat gatgaatgac 120
 tacgttatga cgcacgcac agcatggaca gtgcatatga cgttcttttg gattaatgct 180
 tctgcctgat aaattcatca cctttatagg tcgcaggctg taaaatctct gcatgttgct 240
 gcttgcttgt tctgccactc gatatgctca aatcctattt caacttagca tactacattc 300
 tattccttac aaagtgtcat caaagttcat tacattggac tgcgtttaaa atcatgattt 360
 ctgacaaaat tctgttcta 379

<210> 1684
 <211> 462
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-042-Q1-E1-D7

<400> 1684

gtaccgtacc agaattcgcg ggtcgacggg gaggaagagc ccgaggagga gctaggaact 60
gaatatctgg tgcagccgct tggccgtgct gacgacgaag agcattccag tgacttcgag 120
ccagaagaaa atgggtgatgg tgctgaggac gaggagattg aggatgacga tgctgaggat 180
ggtgaggatc ctgtcaaggc gcaatcctca tcaaagagga agaggtctgg tggggaggat 240
gaagatgatg acgacgggta tgatgatggt gatgatgatg agaagcctcc atcaaagcga 300
tagtcaattt gttcgtgctg atctgtgatc ttctctgctt gggccaagaa ggaaaataat 360
cctcatggag aggattgttg gtaaatgctg tagctttagg acatctgtgg taggtgtanc 420
agctcanact tgagtctacc catgttagtt gttagtgcac ac 462

<210> 1685

<211> 440

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-D8

<400> 1685

attcgcgggg cgacgggaaa agagtaagtg gctcattatt ttgcttgta catgcttatt 60
ccggttggtta tttatcttgc ttatcacatg ctaatagttc attcttttgc agcaactgga 120
tatattctaa aggggtccgt attcccaacg gctcatcac cgtcttgctg aagttatact 180
ggccgggggt gtactgtccg gatccagtca ggcagccggc tcgtcgggtt ttggccacga 240
gctgggacca ctgggaagcg gcccgccacg cggaccatga gacccatgcc aaggctcgtga 300
tcaactactt ctgggtgagt tctcttcaga agaacaagtc cattctagtt tcatgaaaat 360
tatttaactc atggcttctt ccattcttgt ttcatgcatg attgtagaaa ttctatcgag 420
ttcttccgga gcacagggt 440

<210> 1686

<211> 463

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-042-Q1-E1-E1

<400> 1686

cctgccggca ccggtccaga aatcncgggt cgacgggatg acgtagcggg attctcgaga 60
gatgaactac gatagcaagc tccaaaacat gagctgggtc tgctacaaac gtgtgaacac 120
gttgtcccag acaagcatga ccacgtggta gtcttataat aaaacactac cgagttcagg 180
agggggaacc atcaacgagg gtatcgaagt tctttcataa gtccggatta gctcttatga 240
aggaactcct tctccttgaa caaatcaatc agtggcttgg tgtgctcggg acacatatgg 300
aatgaagggt gcaagtctcc agaccacaga atacttcgca cgtgtgcatg actgatttgg 360
gatgattcca aggaaacaag acaatcttcc tcaaattcat ggcggaact tgcatacat 420
gcacatgaat tanggaaagt cactactttc atccaaacat ata 463

<210> 1687

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-E11

<400> 1687

cggctctagat atcccgggtc gacgggaagc gtcacaatac acttcataat ctttgtgttg 60
atctggtaga atcaacactg gtgatgtaac caagcgtctt ttcaactcct gaaaactggc 120
ctcacattcc tcagtccaat tgaatttggg gtccttcttc aacaattccg tcataggctt 180
tgcaatcttt gagaaattct caatgaacct ccggtagtat cctgcgagtc caaagaaact 240
ccggatctct ccaactgtcg tgggtgactc ccaatttgtc acagtgttaa ccttgggtggg 300
atctactgct attccttctc cggatataac atgtccaagg aatccaactt cctttaacca 360
aaactcgcac ttgctgaact tggcatataa ctaatgttct ccgagctttt caagttccaa 420
acgcaaattg 429

<210> 1688

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-E2

<400> 1688

ccggtccagc attccgggtc gacgggttat ttcaatcatt attaactata tctcggccta 60
 tttagtctgt catttcctga tatgaactat ttttaataac ccctttatta attttctttg 120
 ccggcggaca gggcttgggc aaagtacatc aaggtgactc caggaaaatg gcgacaaaag 180
 ctatgttggt atcgacccaa ggtaagtaat taagtagtac tagctagcta ccatctcttt 240
 aattcttggt tcaataccat taattaatta acatgcttga ttaattatta tctgattaaa 300
 ttctattgtc gtaaagggcc tcaagcaggc gccggggact aaagtgtgtg catactacgt 360
 ttgcgagaac attagcatga tggcgtccga aaggagcaga tctaatagac aggactgggt 420
 acgttttg 427

<210> 1689
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-E4
 <400> 1689

ccggtccagc attcacgggt cgacggggga ttataacact tttacctttc catcattgct 60
 agcctcttcg gtatcgtgca ttgccctttc tcaccttgag agttgggtgca aacttcgctg 120
 gtgcatccaa acccctgat atgttatgct ctatcacaca taaacctcct tatatcttcc 180
 tcaaaaaagc caccatacct acctatttat ggcatttcca tagccattcc gagatatgtt 240
 gccatgcaac tttccaccgt tctgttcac atgatcatga catacattac ttttgccaca 300
 ttgtcattgc atgggtcatgt acttgacatc gtatttgtgg taaagccacc atgcataatt 360
 tttttaaaca tgtcactcct gattcaatgc gccatccccg tacgtcgccg tgggcattca 420
 t 421

<210> 1690
 <211> 456
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-E5
 <400> 1690

gtaccggacc agaattcccc ggtcgacggg tctttaaaag attgtatttc cttgttgcaa 60
tccgtgctaa attctcctca tgcttatagt caaaataagg cttttaccaa acatatcggt 120
gatgatttaa tgtaatctta tgaagaaaag cttgaattgg aagtatctat ccctagaaaa 180
ctttatgatg agttggaacc tactattaaa attaaaatta aagatcatga atgctatgct 240
ttgtgtgatt tgggtgctag tgtttccacg attccaaaaa ctttgtgtga tatgttaggt 300
ttccgtgaat ttgatgattg ttctttaaac ttgcaccttg cggattccac cattaagaat 360
cctatgggaa gaattaatga tgttcttatt gttgcaaata ngaattatgt gcccgtagat 420
ttcattgtcc tcgatataga ttgcaatcct tcatgt 456

<210> 1691
<211> 360
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-042-Q1-E1-E6
<400> 1691

taccggacca gaattcgcg cgtcgacggg gtttaccaca accccaaccc gcacctcggg 60
agctccggat ccagccacca gaccaaccac taccctgcgc caacgcggac atgaggcccc 120
cacgccgtct caccacggca tcgcggagtg aggacagtgt cacgccaat atgcgatact 180
atcctaaaga gactcgaagg tcccaccaag gatagaaccg catattaaaa cgctttggca 240
aggtggatat cattacatca acattacata atagatgggg atacatacag aaggcataca 300
atgccacacg aataacaacat catcttacat aagagcacca tcttactacg gatgagacac 360

<210> 1692
<211> 431
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-042-Q1-E1-E7
<400> 1692

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agacgggaca ccttagcctc tatcaagtgg tatcagattt ccagggtgct cggtgagatt 120
ttacagtttt tcgtagttta gatcgagtct cttcttcata cctatagtcc acgaaaaagc 180

caaaaaaat tagggtagt tcatcatatc cgaaccaatc tgagcctttg cataatcttt 240
 ttagggtttt gctttgttga atttgcggtt gcacgctcgt gtctagttagc tggctctaga 300
 gtctagtctt ttagagtttc gagttctggt cataagttgt cacgcccgcg ccgcaccatc 360
 atcatcacc ctagcatcta ccaccaccgg cttatccgcc agcgcttcga atccgtatcc 420
 atataacacc a 431

<210> 1693
 <211> 451
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-E8

<400> 1693

attcgcggtt cgacttccac caaagcgata tccatcatct catcgaaaga cgggacacct 60
 ttgcctctat caagtggat cagaattcca ggttgctcgg tgagatttta cagtttttcg 120
 tagtttagat cgagtctgtt cttcatacct atagtccacg aaaaagccaa aaaaattag 180
 ggtagttca tcccatccga accaatctga gccttgcata atcttttctc tatttgcttg 240
 gttgaatttg cggttgcac gtcgtgtcca gttgctggc ttagcgtcta gtcttttaga 300
 gtttcgagtt ctgttcacag gttgtcacgt cgccgctgcc atatcacc accgcatcat 360
 catcgtcgtt gttgcatat accaccacca catattcacc gccaatccga atccatatac 420
 gccaccacat atccgccgcc atcacgcca t 451

<210> 1694
 <211> 385
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-F1

<400> 1694

gggtcgacgg gggttgatat ggcagatatg acttctttga aaaagacaac tacggagcac 60
 gatccggtgt tgaagtttaa atcggccaca gacactaagg tggttgactt tgttcccggc 120
 gattcatcca agcagttcaa catcagcact aacctggatc ccaaatagga aagtgcgctc 180
 atcgagttca tccgtgagaa ccaggacatc tttgcatgga tgccttctga catgctaggt 240

gtaccaaggg aactcgttga gcacacactt aatattgata ctatgtttta accggtcaga 300
 caattttctcc gccacttcaa cgaagaaagg cacaaggcta ttggtgaaga ggtagctcgg 360
 ttgttggtctg caaggtttat cgtgg 385

<210> 1695
 <211> 359
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-F11
 <400> 1695

gggccagaaa tcccgggtcg acggggacctt tatgataaga ggatctccca ggaggtagtt 60
 ggtgatcttc ttggtgagga attcaagggt tataatcttca agatcatggg tggatgtgat 120
 aagcagggtt tcccaatgaa gcaaggagt ctaacttctg ggcgtgtccg ccttctgctt 180
 cacagatgca caccttgctt ccgtgggttt ggcatgcgta atggtgagcg caggaggaag 240
 tccgtccgtg gttgcattgt cagccaagac ctatcagtta tcaacttggg gattgtcaag 300
 aagggtgaga atgatctgcc aagccttaac gacactgaga agcccaggat gaggggacc 359

<210> 1696
 <211> 376
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-F2
 <400> 1696

gggtcgacgg ggagtccgca aagctcgccc gctacaacaa gaagcccacc atcacgtccc 60
 gggagatcca gacctccgtc cgctcgtcc tcccgggca gctcgccaag cacgccgtct 120
 ctgatggcac caacgccgtc accaagttca cctcatccta cgctagtctg ccgtgtccgt 180
 gaactgatgg cggcattctg tatgtagttt agcagtacca tggtacaacc tttgtaagaa 240
 ttgtgctgct gcctacgggt ctgaagaaac agtgatgtcg tttgaatcag accggatcaa 300
 acaattttctc cgccacttca actaagaaag gcacaaggct attgatgaaa gaggtcgctc 360
 tataggatcc agcctt 376

<210> 1697
 <211> 403
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-F3

<400> 1697

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 ctggacgagg agtagcggac cctgcgaggg gaggggtgag gaagacagcg gggggcgagc 120
 ccggatatgcy cggcaggcag cgcggagggc gaagatgtcc tgcaggggtcg tcaagcggct 180
 tgcgatcaac gggatcagct ccggtaggaa gtagggcgat ggcgagggtgg tttcttcggg 240
 gtttgtggag gatgacgacg aggacgtggt gattgtggac gcgagggcag tggccgcagg 300
 caagcacctt gtccggcgct tccccgactt ccccaacgaa cccattcctc gccgccgcat 360
 cttcacccgag tgcgacgctg cgtgcgggtac tggaggtgaa tgt 403

<210> 1698
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-F5

<400> 1698

gtaccggacc agaattcgcy ggctcgacca acgggtgcct cggatcataga caagcgtggc 60
 ctggccggtt ctgctgcaa cataaccgcy cacagtgtga catccacatt gtatacgttg 120
 agccacctag cgatggagct caattctttc atcgattact acaagtatat ggttgatttg 180
 atagtgcgcy tcattcatga cttgcacgcy ggatgagatg ctcaagtgat atacaaaag 240
 ttatatgatg cctcattgtc tcattgatgc ccctaagttg ccatatggca ttgttgagg 300
 gatccgggaa gaatcctgtg tgggaagaga acatagaaaa cgaagagttg gcccaaatag 360
 ccagtagcat cacatttttc gaaataggct ttcaccctgc ttttaagtct cgg 413

<210> 1699
 <211> 458
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-F6

<400> 1699

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ggcagatgcg ctgcggtgga caacatgctc aaactcacat aatcccagtc aaatgagaat 120
ctaaatgcat ttcatagtta ttactttgta ggatgcaaca aaaacaacca taacgctaca 180
tcagccatta tataagcaac attttgacat atcccaatgt gtgaatgaaa cgtgcagaga 240
gagcttttga agatggagca gatagggcgg gaaagattgt atgtatgtgg gcgagagagt 300
acgagacaaa cctaacgaga cagagagaga gatacagtag agaaagagag aggaagaagt 360
taggtctgtg agacagatgg atacatgtaa tagacatgag atgcgtgtac atctggattc 420
tggtagacgt ggaaagagaa gagacgacat gtttcatg 458

<210> 1700

<211> 406

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-F7

<400> 1700

gtaccggacc agaattcgcg ggctcgacaat gatgcgtagc ttgaaggcgt ccctcgcgac 60
gacgaagtgt ggatgtcatg tcgcgcggga taagtcaatg aagaattgct cgctttccac 120
gccgacctgg ttgtgttgat gccgcaagag ctcgatggag tcggcctggt ggagatcgca 180
tccgtgcgcg tgcagtgtag tcgatgcacg tcgcttgacg atggttctat cgctcggtagc 240
agtctgccgg cgccgcgccg atcgttggtg gcgtagtcgc gaaaactgaa gaagtcgatg 300
tagcgactcg agtcacagct gacgagggca gatctgatcg atcgcgatcg aagccgccgg 360
tgcgctctgta gacgcgtacg tgtaagctca tattgatgca tgcacg 406

<210> 1701

<211> 396

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-F9

<400> 1701

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 atcaacccga tctctgtcca ggagttgcaa ctagtttctg ttgtttgtag gttatgtag 120
 tagtctatca cgtggcaccg ggtacagggtg ggcttgggac agactatgca ccatggcacg 180
 gtgtaccaag tgtagatcca tccgtcgagg tgggcttggg aaccctgcac acatcattta 240
 gggccatgag cgacaccccg gccggatctc cttgcggtt gatgtgacca tagaccgtgc 300
 tattccatgt aactgcaga ttgggtgttt ctgtattaag gcgccatcga cacaaccata 360
 gaagcaagag atcaaaccac ctttagaac accatg 396

<210> 1702
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-G1
 <400> 1702

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 tattatattc tgttttggac attattgggc ttattatac acttttatat ttttttggg 120
 actaacctat taaccggagg ccagccag aattgctgtt ttttgcctat ttcagagttt 180
 cgcagaaaag aatatcaaat ggagtccaaa cggaatgaaa cttttgggaa cgtgattttt 240
 ggaacgaacg tgatccagag gacttggacc ctacgtcaag acatcaacca ggaggccaca 300
 aggtangggg catgcatatc cccctgggca cgccctccac cctcgtgggg cccctgttgc 360
 tccaccgacg tactccttcc tcctatatat acctacgtac ccccaaacta tcaga 415

<210> 1703
 <211> 370
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-G11
 <400> 1703

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 gttatgaact cattctaaat tcatattggt gtaatatcta ctgtattcca acttctctat 120
 ggttcatacc ctccgatact actcatagat tcatcaaat aagcaaaca cacaatgaaa 180

acagaatctg tcaaaaacag aacagtctgt agtaatctgt atcaaacgta tacttatgga 240
 accccaaata ttctgaaata aattgggtgga tgtgagtaat ttgtctatta atcatctgca 300
 aaaataatga acctaaaatc actctccagt aaaaaaatgg cagctaattct cgtgagcgct 360
 aaagtttctg 370

<210> 1704
 <211> 414
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-G3
 <400> 1704

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 aacaactagg agaggctcgg tggcgctctc accctgttca acccggccac cggcgaggcg 120
 ctgtcacttc ccccgatgcc gtacgccggc ctcttctctg agagctctca ttggcggaac 180
 tggaacgaga cttacacctt cgcgcaccat ccgacgtccg ggtggtacaa gctgttgccg 240
 gtccccctgca ttttcgaccg ggtgtttgag ccggaagccg tgcacgtgct cacgctgggg 300
 gaggcgtcat ggcggaaggt gtcaccggc atcaacggct gggcgggggtg ccgcctcggt 360
 ccgggcatcg tcagcattga cggcacgacg tactgggtca cgcgtgatgc tccg 414

<210> 1705
 <211> 460
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-H6
 <400> 1705

gtaccggacc agaattcgcg ggtcgacgag gaggaagagc ccgaggagga gctgggaact 60
 gaatatctag tgcagccgct tggccgtgct gaagatgaag agcattccag tgactttgag 120
 ccggaagaaa atggtgatgg tgctgaggat gaggagattg aggatgatga tgctgaggat 180
 ggtgaggatt ctgtcaagcc gcaatcctca tcgaagagga agaggtcttg tggggaggat 240
 gaagatgatg atgacggtga tgatgatggt gatgatgatg agaagcctcc atcaaagcga 300
 tagtcaatth gttcttgctg atctggtatc ttttctgctt gggccaagaa ggaaaataat 360

cctctgggag aggattggtg gtaaagtctg tagctttagg acatctgtgg taggtgtagc 420
agctcgaact tgagtctaac catgttagtt gttagtgcac 460

<210> 1706
<211> 405
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-H7

<400> 1706

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aagttggaag ctgcctgcaa ctatttgaaa ttactgtatg attctgcaca tagcatcatg 120
gttgcggaac atccaacttc caacttattt ttccatgagg cgtggaaaact tcagctggaa 180
ctgtcaaagt ccataaccca tgaagatcca gttttcagta gcatcgccaa agaaatgcac 240
gagaggtttg acaagtactg gtaggattgc aaccttgttc tatccattgg tgttgtcatg 300
gaccctcggt tcaagatgaa acttgtataa ttcagttatt ctaaaatcta tgggtgtggag 360
gcatcaaagt atcttaatgt ggtggattat gctcttcacg acctt 405

<210> 1707
<211> 455
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-H8

<400> 1707

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accggcgact ccctcgtgat cataatgaga cctagcctca aacagtatgt aggggtgtta 120
cgggatgatg ttteccaggg ccogaagctg tctaaatcct tgtcttgtgt tgcgtctctc 180
gattccgctc aaccctctc aagctaccac atagatgtgt tagcctcgcg actaagtcct 240
gacaaaacca cgacattact tgcttatgct aaccatcatg acatcacttt atatcaaag 300
gatgtgaaaa gtgcgttcct caatggtaag cttgaggaag aagtatatgt tgctcaaccc 360
ccagggtttt aagatccaaa gcatcctgat agagtcttca gacttaataa gggcctctat 420
ggcctcaagc atgccctcgg ggcgtgggtat gatac 455

<210> 1708
 <211> 432
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-A10

<400> 1708

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 gccggcgag gcagccggag aaaggaagcc acccactgag ctgagccgga gatgactatt 180
 taacgggaca tcaatggacg gtgagatgtg cgacttgggg aagatcgacg gtgggtcatat 240
 cagcttgacc ggtcagagtc aatgctctat ttcttttcca tttccgtctt tttaaacagt 300
 ttcccttaga tttctgggat gccgttggac agccgcaatg ccatggcgac tgccaggagc 360
 tcccgaatg gaccgcaaaa gogaacgcga ccgcttgcca accagccatt aattttgcat 420
 tgctcgctac ac 432

<210> 1709
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-043-Q1-E1-A11

<400> 1709

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 acctogaaga gtcgaagaa ctggttctg gaacttttgg aactgtatat catggtaaatt 180
 ggaggggctc tgatgttgca ataaaaagaa tcaatgacag atgttttgct gggaagccat 240
 ctgagcaaga aaaaatgcgg aatgacttct ggaatgaagc atctaaccctt gctgatctgc 300
 accaccccaa tggtgtggcc ttttatgggtg ttgttctaga tgggcctggg ggtccattg 360
 caacggttac agaatacatg gttaatggct cacttangac ggctttgctg aagaattcca 420
 agagcctgga tcgacgcaaa 440

<210> 1710
 <211> 467
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-043-Q1-E1-A12

 <400> 1710

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 ctgagcaagt tcaagtcttc tgtgaagcct tctctcgagg ctgcttctga cagtgaacaa 180
 gacgagatgt ccggactgac aactgatgag gatccgtctg atgattccga cgaccctgac 240
 gaggaggagt cttaagttct tgggagctga ggtatctgct ggcgttcttg accggaagaa 300
 cccagcaatt gttatttgag gtatgcaggg tgacactgcc actatgtatt gtttcttttg 360
 aaccagtaga ttatgtattc atgtgctctt cagcttgcaa agctgcaaag attatgattt 420
 gattgtgtgc gtagattcga ttcaaggatc aatgagattg tataaag 467

<210> 1711
 <211> 422
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-A8

 <400> 1711

ttcgcgggtc gacgggggga aagaaggctt gaggctggtg ccatggttct tgctgatcgt 60
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 gaagtatatg aacagcaaac tgtgaccatt gccaaaggcag gaatacatgc atcgctaaat 180
 gcaagatgta gtgtaattgc tgcagcaaat ccaatatatg gatcttatga tcgttcaata 240
 acaccaacaa agaacattgg gcttcagat tcaactgctct ctcgttttga tttgcttttt 300
 attgttctgg atcaaaggga tgctgagatc gatcgccaga tttcagaaca tgttgcacgg 360
 atgcatagat actgtgctga tgatggagga gcaaggctct ttgataaagc aggatatgct 420
 ga 422

<210> 1712
 <211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-B11

 <400> 1712

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gggtcgacgg ggagggcgag tacgaggacg aggaggacga tgccgacctc caggactaga 60
gatcaaccga gtaccgcgta tgattattgg ttttcttatg ttaatttgat gattgtttta 120
ggcttggtgta gtgctgtttc tgtctttctt ggtgggtgct gttgttgagg agcagaaaaac 180
tcatggaagg gtggttgctg gtgagatagc ttggtataac ctctggcaca attgctgtgt 240
gcaagcaacg ccctgttgcg ttctactggt aatgggtgtg gttgtctggt gtccagtgtc 300
caactatcat gttcaaactt aatgtaattt gaagttgctt gcgtctaaaa aaaaaaaaaa 360
aaaaaaaaaa aaaaaaaaaa aaagggaac tccacaagac tcaaa 405
  
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<210> 1713
 <211> 468
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-B12

 <400> 1713

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cactccctct cgctctcgcg gcgcaggtcg gaggctaaaa ccctagacac aggcgactat 120
gacggcgccg gcggacaagg ggaagaaggc caagaccgac accgacgtcg gcgaggagaa 180
cgagcagatc gacggtgccc tcgtctcttc catcgagagg ctccaggaga tccaggacga 240
gctcgagaag gttaatgaag aagcaagtga taaggttttg gaggttgagc agaagtacag 300
tggtattcgc agacctgtct atcttcggag gtgtgacatc atcaaaaca ttccagactt 360
ttggctgaca gcgtttctaa gtcactctct tctcagttag cttttgactg aagaggatca 420
aaagatgttc aagtacttgg aatctgttga tgttgatgat tctaaaga 468
  
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<210> 1714
 <211> 402
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-B2

<400> 1714

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tgttctttca atctttccac cgttcggtt attatgacac tcttcatcat tgtcatcttg 120
atttgcata tcatgtagtt gacattgtat ttgtggcaaa gccaccgttc ataatttttc 180
atacatgtca ctcttgattc attgcacatc ccggtacacc gccggaggca ttcacataga 240
gtcatatttt gttctaagta tcgagttgta attcttgagt tgtaagtaaa taaaagtgtg 300
atgatcttca ttattagagc actgtcccag tgaggaaagg atgatggcga ctatgattcc 360
caaaaaaaaa aaaaaaaaaa aaaaaaaaaa agcggccgct ct 402

<210> 1715

<211> 459

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-B5

<400> 1715

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aatgacgatg ggaaagacat ctctatgttg cacaatattc ttgcaatata atcttgcata 120
tgatccaact cttcatgatt taacctttct gccatagatg gttgaagaaa tcatacaggt 180
cattgactgt gtttcttata tcttgtcaa tcagattcat gatggctagc aaggggattt 240
gtgtcaacat tacgttgcag tcatgtgact tcatgtgtca caacttcatt taagctgagc 300
tcatatcgac cggacatgtg atgtttgcgc attaggaaga cgggtgtctta actgataaca 360
atgttgtgta gacctgtgtc gcttctcttg tactgaaatt tgtaatctgg ggagctttca 420
tgaatttttg atcaacttct gcttcagtca tgtgttttg 459

<210> 1716

<211> 467

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-B6

<400> 1716

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 attttgagcg gcatactttc attgtcaaca aaacaaccga gagatggcga tatcttccat 120
 gctacacaca ttataggcgg ttcccaaaca gaatggtaaa gtttatactc cccctccacc 180
 aacaagcatc agtccatggc ttgctcaaaa caacgagtgc ctccaactaa caacagtccc 240
 gggggagttt tgtttgcaat taatttgatt tgatttgcac aaagcatggg actgggcatc 300
 ccggtgacca tccattttct cgtgagtgag gagcggagtc aactcctctt gagaataacc 360
 cgcctagcat ggaagatacc gacagcccta gttgatacat gagatattcg agcatacaaa 420
 acagaatttc atttgaaggc ttagagtttg gcacatacaa atttact 467

<210> 1717
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-B7
 <400> 1717

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 ggcggacaag tcgggagctg ctgtgcgaga acggacctga gctgtgtgcg gtggtgtcat 120
 aaggagccta tccatctcca ctagaattat cccaagtctc acttcacatc gtgatgttgt 180
 tttacctttt tcctgtcatt gtctgtctat aacggatagc gctccctggt ggcgcgcggc 240
 ccggcgggga tgccttagtg gtggagggtg tatgtcctct tccgcggggg gcccttgctt 300
 gtacctagat ggttactctt tccgtccatt gtcgccggct aacattgtga taatatcagt 360
 ctgggtaatg ttagattaag ctgttgcctt cacctgacaa aaaaaactta caatccaaaa 420
 aaaaaagcg gccgctct 438

<210> 1718
 <211> 458
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-043-Q1-E1-B8
 <400> 1718

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 gcgatgtaca acatatgggt cactcggtatg aactgtttgt gattaggcaa cacaaaagaa 180
 acggttaagcc agatgaaggt gtttgtgata tacggcatga ggttcactcg gacgaactgt 240
 ttgcgttgac acaagagAAC agaaacgggt caacttaaca agacatgtgt gttgtgcat 300
 gggattgcat acagaacaac aacatacaca cacacacaca cacacacact tataaggaca 360
 tgcttgcata accaaattaa acatccactt agataggtgg ctactacaac catggcattt 420
 gcacacacca nagtanacta ttacatgcat aattacat 458

<210> 1719
 <211> 359
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-B9
 <400> 1719

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 gcgagtgtcg caggcagtag gtccgggtcg gcggttgccg gagacgtcgt cgggcgggagc 120
 agttgcaggc tgtttggtt ctccctgact gatcagaaag tgctgggaag agcaggtgag 180
 ggtggtgcga aggaagggg gcgcatgat gaggcggcgg attgcgcgga cccgcgggtg 240
 ctcgacctgt ttgggcgcgg ccacctgcc cctgctgcgc tgcattgcat cttcgctgct 300
 cccctgggaa ttgatggta atcctcacct gcttgcctcc aattaccgga catttggtt 359

<210> 1720
 <211> 457
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-043-Q1-E1-C11
 <400> 1720

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 cgcgccggcg gagccttccc gggcgctcac cggacacgcy caacaacact atgaggaggt 120
 acagcccccc acaccgtagt ccccgagga ggggatatgg tggcagcccc gcgcacgta 180

gtccccaag gaggggatat ggtggcagcc ccccgaccg cagccccca aggaggggat 240
atggtggcag aggaagaagc cccctagga ggggtggata tggaggacga aaggagcagg 300
gttctggaag tctcttggtc cgcaacatcc cattaagcgc cagagcggag gatctccgtg 360
ttccttttga aaggtttggc cctgttaggg atgtttacct tccaaaggat tattacagcg 420
gggagccccg naggtttgcc tttgtggagt ttgttga 457

<210> 1721
<211> 460
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-C5

<400> 1721

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gtgcttttggc tctggtggcg gcgatccatt gcttgaggcg acatcgtgtg caagattatc 120
cttgtggagg ccgttggcac ggtggcacc tctcgacct gctgatccca ttaccaggt 180
tgcctgttgc gcctaaaggc tggatatatg gtgatatggt aatgccgatt tgggaaagca 240
ggtgtacagt gtgtgtaaata taagaaaaca atttataatc tgtgatgtga tcattgcatt 300
ttaatttagt atatgcgact caagtaggga agtattgagt gcacctctct ggcaagtgc 360
cgcataaggc accatttttt actcaatcga tttcaaaaca aggcatgaga ctgacatata 420
ctcttttatt gcatcgtgta aagatatgtg gtgtgaaggg 460

<210> 1722
<211> 450
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-C7

<400> 1722

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cactcaaatt gatcgccaag aatgctggcg tcaatggcag tgttgttacc gagaaggttc 120
tttctaacga caacttcaag ttcggctaca acgctgccac tgggcagtac gaggacttga 180
tggtgctgg tatcatcgac ccactaagg tgggtgagatg ttgcctggag catgccgcgt 240

cgggtggccaa gaccttcctg acgtcggacg tcgtggctgt tgagatcaag gagcccgagg 300
 ccgcgccccct cgccaacccc atggataact ccggctttgg atactgatga gcaacacagg 360
 ccgagtttct cctgaggacg tggtttaatt tttggttagca tgaaccaagt tttgagagat 420
 tgatgatgat gatgatggta attttgagat 450

<210> 1723
 <211> 427
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-C8
 <400> 1723

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 attgggttgc ctcccaacaa gcgctatcgt ttaacgcccc tagctaggca taaaagcaag 180
 gatagatcta ggtattgcca tctttggtac gcaatccata agtggctttc atgatagatt 240
 catatggtaa ttttattttc tttctaggga agtgttccat gcccttcttt aagggaaatt 300
 ggaatctaatt attcccttcc tccatatcaa taattgcacc aattgttcta tggaaaggtc 360
 tatcaagaat aataggacat gaaggattgc aatctatatt aagaacgatt aaatctacgg 420
 gcacata 427

<210> 1724
 <211> 406
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-D10
 <400> 1724

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 tgcaatagtt ttcgagggtg gagtattcaa cccaaattta ttgattcgac acaaaggag 180
 ccaaagaata ttctcaagta ttaacagttg agttgtcaat tcaaccacac ctggataact 240
 tactatctgt accaaagtgt ttagtatcaa agtactatgg aagtaacggt aacgatagca 300

atagtaatat ttttgggtta tgtagtgatt gtaacagtag caacggaaaa gtaaatagtc 360
agagaacaat atatgaaaag ctcgatgca ttggatcggg gatgga 406

<210> 1725
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D12

<400> 1725

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ggtgctgagg atgaggagat tgaggatgat gatgctgagg atggtgagga ttctgtcaag 180
ccgcaatcct catcgaagag gaagaggtct ggtggggagg atgaagatga tgatgacggg 240
gatgatggtg atgatgatga gaagcctcca tcaaagcgat agtcaatttg ttcttgctga 300
tctggtatct tttctgcttg ggccaagaag gaaaataatc ctctgggaga ggattgttgg 360
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atgt 424

<210> 1726
<211> 437
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D4

<400> 1726

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aaggctttct tgcattggta cactggtgaa ggcattggac agatggagtt caccgaggcg 180
gagagcaaca tgaacgacct cgtctcggag taccagcagt accaggatgc cactgctgac 240
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tccatgtcgt gctttgctgg gtgggggttc tgggggcaga gtttgatctg tttggtgctt 360
tggtataaat ctgtttatca tcgcaactac cgcttgtagc ccaccgccat tcttctgccc 420

tttcctaagc tctgtat

437

<210> 1727

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D5

<400> 1727

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gctgaactta agaatgaagc agaaggattt caaagaacaa tcgtggaaaa gaacgggtcag 120
aaaagcaagt tagttaaaga tcgatgcgac cttgaacaga aaatagcaga ttcgaagaga 180
aaacgagAAC ctgaggagta ttgttttagag aaaaaaatac tggaacttga tgacgccaaag 240
agagcttttg ctgaaattaa tagatatggg gctgtggata aactgaact agaggaggac 300
ataaagaaag agaagaatat cattgtggag agggaactat tacttaataa gattaataca 360
aagttagcag cagcttcacg agaagtgaac gatagaagag aagcttaca gacctttatg 420
gattctgtga atgaggagac agggg 445

<210> 1728

<211> 450

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D9

<400> 1728

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tcgtgagctt cctccttctg tcttttcatg aggcacctc gttcgagcca acaagccggc 120
gcacctctcc tggtcggggc cccacgggta tcgtgacgag aagcatgctg ctactttgaa 180
gcacaagtgt ggaaaaaaag gatagtagca ttgcccttt tttgggacaa tgctctatta 240
atgatgatca tcacacttct atttatttac aactcaatga ttacaactcg atactagaac 300
aaagtatgaa tctgtatgaa tgccttcggc ggtgtatcgg gaagggaat gaatcaagag 360
tgacatgtat gaaaaattat gaacgggtggc tttgccacaa atacggtgtc aactacgtga 420
tcatgcaagg caatatgaca atgatgatgt 450

<212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-043-Q1-E1-E5
 <400> 1731

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 caacggatcc tcatacggg aggtggacga gggacgtcga gctgttgcaa tggatgatgt 120
 catcggggaa gaggctccg ctgggcagcg gtgacgtggc agacgaagga ggggtggggtt 180
 tcgcggtctg agcggagagg ttatggcggc ctgggatttc gaatggcgaa aagggggcgga 240
 tgggaggggg tgaagcatga cttaaggaca cgcttggtcca aaatgtagag tgtgttacaa 300
 aagtaccccc caccgatttg aactagcggc cctttcggct caggggttaga agggggattt 360
 cacgtttcgg gatttggcag ctggagggag ttttcacgcg cgttgtaatt tgggatagca 420
 aggcgcgggt tgtgaaggcg ccagttttga gagcacgata t 461

<210> 1732
 <211> 336
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-E6
 <400> 1732

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 tgtctagatg atgattgagc gggctcggta cacaccgacc tatgtagctt ctgtgtcgtg 180
 gtggtttgat gtctcatagg gtagaacatt gaacttctaa tggtgtttcc tgcgttgtgc 240
 aagtagtctt aacatttcgg tggtgatgtc tgtgtttatt ggagctgtga taccattcaa 300
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<210> 1733
 <211> 382
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-E9

<400> 1733

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cgcgatgatcc ttggcagact tgctctgtcc acctagtcaa tttggtgtga catagatcac 180
cacgttcgtc ctctgtttac gctagcttaa gatggcacga caatcgggtt gctcgactta 240
ctcatcttct ggtcaggtag tacgtacatg aaacacagta gttgctgcgc ggaagcacc 300
accatgtaaa ttctatgcct gtacgcacgc agcatataat agtcagtcgt tgggtgttcat 360
acacaagctg tagaatcaca gc 382

<210> 1734

<211> 443

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-F10

<400> 1734

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tagatcgagt ttgagttga tttttttaag ttatagacct accccgcagg tatgttgtac 120
atTTTTTcat atTTTTTtag gattacctaa atatgaaatg tttgggttga ttctacgatc 180
ttaccgtggc ccagtgtctt ttttagggac gtgccatcat tccoctcatg atcgttggtc 240
tgcctaacaa tttatttctt gtttaatttg gctacccac aacgtgggta cgtaataatc 300
atggcttaca tgattccgtt caaacacata gccttttgct aataacaagt ccagtaatct 360
aacccttaca cttacacgtt caacccatat ccaatatggt ttgatgcaac ctttagaaca 420
ataaagaccg ggaaattacc ttt 443

<210> 1735

<211> 437

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-F12

<400> 1735

gggtcgacgg gttgacatga aactttccac cgttctgtta ttatgacacg ctccatcatt 60

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gtcatactgc tagcatgatac atgtagttga catcgatattt gtggcaaagc caccattcat 120
aattcttttca tacatgtcac tcttgattca ttgcatatcc cggtacaccg ccggaggcat 180
tcacatagag tcatattttg ttctaagtat cgagttgtaa ttcttgagtt gtaagtaa 240
aaaagtgtga tgatcatcat tattattgca ttgtcccagt gaggaaagga tgatggagac 300
tatgattccc ccacaagtcg ggatgagact ccggacgaaa ataaataaat aaaagaggac 360
aaagaagccc aaaaaaggcc ataaaaagag aaaggcccaa aaaaaaaaaa caaaacaaaa 420
aaaaaaaaagc gggcgct 437
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<210> 1736
<211> 440
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-F5

<400> 1736
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gccaacaggg aggcagcagc acctccatgg ccatggccag gctcaccatc aacctcccg 120
gggagaagat gagtggtggg agtacttccc atgcccttc tgctacattg aggtggaggt 180
cccccttctc tgtgaccacc tgcaggagga gcaactgctc gacatgagga atgctgtgtg 240
cccgatctgc gccgacaacc tcggggccaa cacggccggg catttcaggg aacggcactc 300
acaacaactc aagatgagga agtcttcttc ttccagggca ggagcagcag atgacaagga 360
agcgtatgaa gatgatgact cctactatga agaatcatca tacatcatgg gcaggccagt 420
acctgatgat cattcacctg 440
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<210> 1737
<211> 442
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-F6

<400> 1737
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aattcgcggg tcgacgggga catctcatct gcaattacc accatctcct ccatactctc 60
cggcgaaacc cagccccagt ccacccacc gtccgtatcc atggcgccca aggccgagaa 120
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gaagccggcg gcgaagaagc ccgcgaggga ggagcccgcg gcggagaagg ccgagaagac 180
 tccccccggg aagaagccca aggccgagaa gcggtgccg gcggggaagt cggccgccaa 240
 ggagggcggc gacaagaagg gcaagaagaa ggccaagaag agcgtggaga cgtacaagat 300
 ctacatcttc aaggtgctga agcaggtgca ccccgacatc ggcatctcct ccaaggccat 360
 gtccatcatg aactccttca tcaacgacat cttcgagaag ctgcgcggcg aggccgccaa 420
 gctggcgcgg tacaacaaga ag 442

<210> 1738
 <211> 439
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-F8

<400> 1738

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 tgtgaagaac cagaagacca gggcgctact caagcggttc caagtgaagt tcaagagaag 180
 gagacagggg aagaccgatt acagggccag gctcaggctc actaaccaag acaagaacaa 240
 gtacaacacg cccaagtacc ggtttgttgt gcgatttacc aacaaagatg tcaactgccc 300
 aattgtgtac gccaccatcg ctggtgatat cgtgatggct gctgcctatt cccatgagct 360
 tcctcggtat ggtcttgaag ttggccttac caactatgcc gcagcgtact gcaactggtct 420
 gcttttggcc cgtcgtgtg 439

<210> 1739
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-G2

<400> 1739

gggtcgacgg gagactcttg aaaaacactt tgagtcctct tcatttaaca ttggcagctc 60
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 gagctccagc cagcaggacg tattccttct tccattaaga tcacatgata actcagcaaa 180

gtagagtat gggacatact catccatgct aggaaagctt cgtgatcagg tcctggcgag 240
gccgttgagg ccgttctcga agaacctcac agagcgcgac tggctgagga gctcggccaa 300
gatgtgggac atggtgagga gatctcccggt cgctcggac tactgcaagg cgctccagag 360
ttcaggattg ttcaggaagt agccacatgt gcgttgtaat gtcctcgatt caaccgacct 420
gagacacaat ttgaat 436

<210> 1740
<211> 391
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-043-Q1-E1-G5
<400> 1740

gtaccgatcc agaattcgcg ggtcgaccgt gtggaacaat tcgctgcggt acgggatcag 60
tgagggaagc gacgtcttcc tgctgggtccc tgacaagctg cccggcgctg agaatggctg 120
tgccgtggag gtgtgcattc gcaagggtggt ggctggtaac tagctcaagc tgtgcgccga 180
tctggaccgt cattgtcggt ctggctgcag cattgcctgc gagagtctctg ctcatatccg 240
agtaaacttg aacggcatcc gtattgggtga attccttagt cgttgatggg tcttctggta 300
ctgagatgga agcataggca tctcgcgcac cgctgatgca tgaaactgtc tggatatcgt 360
cttttctgag gagggatgaat ttggatatgc t 391

<210> 1741
<211> 430
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-043-Q1-E1-G6
<400> 1741

aattcgcggg tcgacgggga gtcggacaag ctcgcgaggt acaacaagaa gccaccatc 60
acgtccaggg agatccagac ctccgtccgc ctcgtcctcc ccggcgagct cgccaagcac 120
gccgtctccg agggcaccaa ggccgtcacc aagttcacct cctcctagac tgatgaactg 180
atgatgcgtc cgtcgcctct agttgggtctc tgtatctgca tctctgttaa ctctgcttat 240
ccctctgcaa gtagtgctgg tagtctgtgc tgggtgattg ccaacgcttc gttggctcgt 300

tcctcgttgc ttgggaggac cgaagcttct gcttttgaca agctgatatc tatctagaac 360
 tgaagttgtg gtggtaaaaa aaaaaaggat aagatgaaaa aaaaagcggc cgctctagag 420
 gatccaagct 430

<210> 1742
 <211> 437
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-G8
 <400> 1742

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 cgtaatcggg caagcattga cagggtcatct gcagcagtaa catcttcttg ttccagctct 120
 tcttggttct cctctagggt gatgtgggat tcactatcac tgtctacttc aatgttttgg 180
 ggtgaagtat agcggttctt gaaatgcttt ttgaaaagac gtgtctcttg gaagaactct 240
 ccttcatatg tgtctgggtt aatgtgaggt tcataatcct ctctcttttg gggagatagt 300
 ctagcacgtg gcgacacttc ataaacgacg tcccaacctt tcagatttgg attagtttgg 360
 caggcccacg gtagatagaa tacttgggtc gcctgttgaa ccgtaatata gacatccgga 420
 acatctaaat gggtgct 437

<210> 1743
 <211> 369
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-H1
 <400> 1743

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 cgctgctcct gaattgatcg ttcttttttc tctctctcta cccgcgccac cttgctgcat 120
 cgaggaggatt gctaacagag aaattagtag ccagcaagaa cgcggatcat gaacgcgaat 180
 catgcgcccc gtcggtagat ttctttgatc cgtcttgttt gttcaccttg ctgtatagaa 240
 agatgagaga tcagtgatcg gaaccgatgc attctgagtt agagagtatc tgttcatctg 300
 cacggggtgc aaatatcagt ttctgtacca ccatggagat tactatctga aatggagtct 360

gcttttctc

369

<210> 1744
<211> 306
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-H10

<400> 1744

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aagtggatc agaattccag gttggcccg gagattttaa agtttttccg aggttagatt 120
gaatccggtc cgcaaaacta atgtccaagt tagagccaag aaatagaata tgggtaggtc 180
aacacatctg aagtaatcca agccatgcac aatccagtac gtacacgctt tgcagaaggt 240
gctgttgcaa cgacgggttc acttgatggc cttaccatca attgcgcaac ctgaatggct 300
aatggg 306

<210> 1745
<211> 160
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-H11

<400> 1745

cgctgtcga tgctactcac taaagtgagt cgtattataa aggggatggg aaccgtgggc 60
tcggtaaggc ttccagatca agtggagcag gggatcgtat cgcaaatgac tcaatataga 120
aaaaaaaaagc ggcccttcta aacgatacaa gcatagtttc 160

<210> 1746
<211> 404
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-043-Q1-E1-H3

<400> 1746

gggtcgacgg gtcctcctca ccggcgtgct ggagcacacg ctcgctctat tcttcgtacg 60
ctacatgcat agacacggct ccaccagctg ctgcgctgct tggcagcgct gcggcatggc 120

gaggtcggac tgcagatgac gtgagcgggc gagccttcag cttcaaggca canggatggc 180
ggcgacacgg cggatgatggg cgagaaattg ttggccggag caggctgggtg ccgacatgcg 240
caacggtggc ggcggcatgt tgatgagtgc gtgtatggga gcttacttta gttttatata 300
aggttggtca accctttttt tcttagtaca cgtaaacatt agacttaggc aacccttttt 360
tttgaagtta gtaccacaac cagatcacgg aaatcctgtg caag 404

<210> 1747
<211> 407
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-H5

<400> 1747

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gtatagaaag gggaaaagag ggagaaaagc aaccgtgagt actcatccaa agtactcgca 120
agcaaggagc tacactacat atgcatgggt atatgtgtaa agaggcatat cagtggactg 180
aactgcagaa tgccggaata agagagggat agctagtcct gtcaaagact aagcttcttg 240
acatctccat cttgcagcat gtagaagaga gtatattgaa gtcctccaaa tagcatcgcg 300
tagcataatc ctaccggta atccctcctt cgtcgccctg ttagagatcg atcaccgggt 360
tgtatctggc acttggaaag gtgtatttta ttcaatatcc agttcta 407

<210> 1748
<211> 428
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-H6

<400> 1748

attcgcggtt cgactccatc gtctcaaggt tcgacatgat ccaagccgag gcgacaccta 60
gccactccct cggagccctg gctgtgccag gctgccagcg gccagttgga aaaggaggaa 120
ggcgccgcac catccctgca tgcgacgtct tggggctgga gccggcaacc gcgcgctgcg 180
acccttggct ttctatcgag ttggtgggct ccgtgatgga gatgggggccc gatggaggcg 240
ccgcgtgagg gctcagcagc cgcgagcttt acgatgctcc gttgtactgt agcagcgatg 300

tactagtgt atccagtga atccagcttt acgatgtgc tgcagcactg tggggacgta 360
 cgacggtacg agcaatatct atttgctagg aataactgtg ctatccagtg gatgttaacc 420
 ttttgcg 428

<210> 1749
 <211> 288
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-A1

<400> 1749

attccccggc tcgacgggat gtgctacaag ttatagaaca tgcatttata gatggatatg 60
 attcttcgca gtatatccgg ctgtcaatga tcggctcatc atgggtctgcg cttctgcatt 120
 caactagtac cctacgatat gttgctgttg taagatgtct agcctgagta ttactatggg 180
 aaccttgtgg tatacatttt gtaacctgta aggcaatttc atacctgggc cattgccggg 240
 tatttggtcg ccaagatgct gctggaggat ccttcgcac ttggtatg 288

<210> 1750
 <211> 412
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-A11

<400> 1750

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 tgtagatgca actactacgc tacatttgga gctattccaa acaactgttc tactatatga 120
 atccagttta ctattcagaa taatctagat tagtgtcaaa gtttgcacg gcgtaaccct 180
 ttacgatgaa ctcttttaca cctccataat cgagaaaatt ccttagtcca ctagttacta 240
 aggataactt tgaccgctgt cttgtgatcc attcttggat cactcttgta ccccttgact 300
 gactaatggc aaggcacact tcaggtgcgg tacacagcat accatactgt aaagagccca 360
 tgataaaagc ataggggacg accttcgtcc ttcgtctttc ttctgccgtg gt 412

<210> 1751
 <211> 308

<212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-044-Q1-E1-A2

 <400> 1751

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 tggagatcca gacctccgtc cgctctgtca tccccgggga gctcgccaag cacaccgtct 120
 ccgatggcac caaggccgtc accaatttca cctcctccta gactgacgac gctccgcttg 180
 ttgtgacaga tgtggccgtc tgctgtatct gtagtcgctg ttgactctgc ttatctccat 240
 ctgcaagtag tggtagctgt agtgcgcatg ctgggtgatg attgccaacg cattgttggc 300
 tggttgga 308

<210> 1752
 <211> 392
 <212> DNA
 <213> *Triticum aestivum*

 <223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-A4

 <400> 1752

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 atgagatcct gcttgtcagc gttaatgacc cctttgtcat gaaagcatgg gcgaagacat 120
 acccagacaa caagcatgtg aagttccttg ctgatggagc ggagcatac acaaaagcac 180
 ttggtcttga gcttgatctt acggagaaaag gattgggtct tcgttcgagg cggtttgctc 240
 tccttgetga cgacctcaag gtcaccgtcg caaacgtcga ggaaggtggc cagttcacia 300
 tctctggtgc cgaggagatc ctcaaggcac tgtangagct tcagcgcttc ggaatcgag 360
 cgatcaccca aaccttgtgt catatcgatg ta 392

<210> 1753
 <211> 429
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-044-Q1-E1-A6

 <400> 1753

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ctatgagatg gctgtatctt ccatacaaaa tgcattatag gcagttccca aacagaatgg 120
taaaggttta tactccccca accaccaaca agcatcaatc catggcctgc tcgaaacaac 180
gagtgcctcc aacatacaac atccctgggg gagttttatt taattatatt gatttgcttt 240
gctctttttg gatcatgggc ctgggcatcc cagttaccgg tcctttctcg tgaatgagga 300
gcggagtcca ctctagtga gaataacca cctagcatgg aagatatagg tagccctagt 360
tgtaacatga gatgctcgag catacaaaat agaatttcat ttgaagggtt ggagtttgca 420
acatacaaaa 429

<210> 1754
<211> 381
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-B1
<400> 1754

gggtcgacgg ggaacgccag gagttactga gcaggcatgg atggatggat gtttgagcgg 60
cgagcatcaa ctgtggttgt gcataattat gggtatgtca gacgtgttaa ttgtcgcaat 120
ttccaattgg tgggtactata tatatgtttg ccaaataatg tgtgcaccgt gtgcaactat 180
ggaacagcga agtggtaatc attttgtgag ctttgaaca gtgaagtgc acatatttgt 240
cctaaaaaaaa aaaaaaaaaa ataaaaaaaa aaaaaaaaaa aaaaaaacaa aaaaaaaaaa 300
ttaaacaaca aaaaaaaaaa aaaaaaaaaa agcggccgcc ctaaaggatc caagcttact 360
taccgtgca tgcgaattca a 381

<210> 1755
<211> 58
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-B11
<400> 1755

gtaccgagtc cagaattccg ggtaggatgg gacatgctca accctgttgg catcacct 58

<210> 1756

<211> 395
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-B2

 <400> 1756

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 ccgaggccga ttcgatcgag tatgggtacc gggccccctt gggcagcata cacgtcttca 120
 tcggcaagat cggtgagcct aagcctgagc tggacatcta caccgacccc gtcgagacgg 180
 ctacgcgtgc gagatctacc caggttaaac cggccatgaa gcgtgccttc gttggagtca 240
 tctacggagg agagcgtgag gacgaatcag agcacggtaa cgagaccgtc gtctattccg 300
 gcgacgagtc ttcgaccgga gagaccgagt cgctataccg gatgcaagac gatcagggtga 360
 ggggttggtc cgatggcgac agtattccgg acccc 395

<210> 1757
 <211> 389
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-B3

 <400> 1757

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 cccaaccaac caatccccca aggaacatgc gcgtaattac ttaaattttt gaggacttca 120
 aaatttttgc aataagtata tgatttcttt tgactaatgt tgagtccatg gattatacgc 180
 actctcacct ttcaatcttt gctagcctca tcggtaccgt gcaatgccct ttctcacctt 240
 gagagttggt gcaaacttcg ccgatgcac caaacaccat gatacgatac actctatcac 300
 acataaacct ctttttatct tctcaaaac agccaccata ccctactatc atggcatttc 360
 catagccatt ccgagatata ttgccatgc 389

<210> 1758
 <211> 413
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-B7

<400> 1758

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atgagccgca tctaaatagt tgcagaagct agttcaatat ttgacacctc aaaatcggct 120
tctaaatagg tctttttgcc ctccgaagtt cgtgaacaca gcttggtcca attttttagg 180
ccagtttttag aattctttga ctctcatat caactcggaa ttgagtgatt ctttttgcac 240
tggaagcgtt gagtttagtag cattctttga aagaatttat cagaaaattg tctcaaactt 300
ttcaagagga aagttggaga gagagttgtt gtatatcctg cttggcagtt gtttttcatc 360
attatcttca ctgccgttgt gatcttctact tatatcttgc tgtcaagagc tac 413

<210> 1759

<211> 387

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-B8

<400> 1759

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actctgaagg gcagcgaggt gtgcacgggt tcgccgagcg tgggcgagtg gagcccgag 120
ctggtgaacc ctacgtggt ccgcgcgatg aaaggtcgca tcgaatggcc ccagggcgcg 180
aagaagcaga gcctgaagtc aaagcctctg gattcgagat tcgacggctg caaggtccag 240
ctgcgccaag cattgaagca gaagatatag gatggcccgt ccacacgctg tatccaattt 300
ctgaatatag gaccatcttg ccttggaagg gtgcctggtc tgtaagacga actgacgtgt 360
agtaacattg gtccctgaca tgggtgc 387

<210> 1760

<211> 405

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-C1

<400> 1760

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ctgaccttct tcctctcgca gcacacgcgg ggagcaggat acagagcggc atctctcca 120

cgccggtgtt cgcacaaaac cgaactaccc cagtctcttc ctcaacaccg ctgtttcgcc 180
 ctcaatttcc atcggcctct tctacatcgg cgtcagctct ctccgacctt cctcgtcaac 240
 tctctctgac cttccccgca cctttcctct gctgccgcgc atggtgcttc gtggcatccc 300
 aagtgcctct ccaaaacagt cgtgtgtagt gctccctga aatcctcatg tgtggaaagc 360
 tatggcatcc agctactacg gctgtttcta attaacaatt ttcct 405

<210> 1761
 <211> 368
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-C3

<400> 1761

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 attgaccgga gatgtgtctc ggtcatgtct acatagttct cgaacccgca cgggccgcac 180
 gcttaaagtt cgatgacgat ttatattatg agtttatgtg ttttgatgta ccgaatgtag 240
 ttcggagtcc cggatgagat cggggacatg atgaggagtc tcaaaatggg tgagacgtaa 300
 agatcgatat attgaacgac tatatttaga catcagaaag gttccgagtg attcaggtat 360
 tttcggag 368

<210> 1762
 <211> 401
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-C5

<400> 1762

taccgatcaa gaattcccgg gtccgacaaa catcctcgga cgacctcccc gacgccgact 60
 tagaaagctc caaagcaacc ccgagcggca tcatcaaaac cgatgaaggc cctgccgaag 120
 atgatgatgg agattccac catttctggg taatggcata actcgtgttt cctcatttaa 180
 catggatata ctcttggtg actcgttcac tgaccgacta atttgtgaaa tcgtagtgct 240
 tctacttctg agacctcagc cagacatgaa gatcaagaaa tggaggatgc tgccaattgc 300

aaccctggta tgatctaaat agtttcgctt tcggtcgata ggatcctcat ttttaacttt 360
gaatcttttc tgtagtcca cctagtatca tcattgatct c 401

<210> 1763
<211> 399
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-C6

<400> 1763

aattccccggg tcgacggggtt tgtcacttcg gtggaaggtg aggccgggctt gttttcttct 60
tcagccctta catgctgttt cagccatctc tatctccgag acgcccggctt cgacttctcc 120
tctgtcctca ctcccgtgga ctctgactct gaggggcgatg ctgctgccgc cgtgaagagc 180
tccatggacg ccatgatgag cagggttcctg gtcgtcagtc ctccgatcgg gaccgagggg 240
acgggcgacg cgcctggcga tggggctccg ctggcggtg atggcggcac ccaggtctga 300
agagggtggct tcgtaacgat gcacctcat gtttgcctg tatcatgtag catgcctcac 360
agaggcattt aaaattgttt gcttgggaaca atatgttt 399

<210> 1764
<211> 412
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-C7

<400> 1764

aggtaaccgga tctagaattc gcgggtcgac gggcagcgga cgctcgcttg gcaaagctac 60
tggttccagc accctatgtg gtgccagaaa agaaggccaa gaagaaggcc tcggggactc 120
agaagagtgc ccagcgccta ggggtgtcgg attcatcatc cggtgactcc aagacgtact 180
cctcccgtga agacgaggag gaggaagaag agacctctcc ccctccagcg gggggagaga 240
ggaaaaggaa ggccgcccc cctagggagg ccgaagggtc caagaagggg aaaacccttc 300
ctccggacgg ctccaccaac gccgacgacg gcgaagagga ttggccgcac atggccaagc 360
ccctagcgag atcgtaagtg tctggatacc agaatgattc atagtattct tc 412

<210> 1765
 <211> 403
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-C8

 <400> 1765

 attccccgggc cgacctaggg actagctgcc ttgtactatg aaatgcttcc tgcagccgga 60
 caaataatga gttgcagctc gcagagcgac tgttcggtct gcaggagtta aggctgaagg 120
 gatgtctgcc taaaaaatgg ctaaggaccc aaggcgtaca catagtccaa gtcggcttcc 180
 cgcctcaccg accaactgtc aagcagccga ccagccggcc cctacttaac ttgctagaaa 240
 actccaatcg gctaagtact ttccttccca aaagtggcta agtacttgac ccagccacag 300
 tccgtggaat ggctgctcgg ctggcaaggt ggcaaccgag ggaaggcggc aaaggaaaaa 360
 agccaaagag cagaagcaag gaaagatatt acttggcaaa aat 403

<210> 1766
 <211> 394
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-C9

 <400> 1766

 ggggtcgacgg gaggtagagg cgaaagtgag gctggtcacg gagtccgagc atgggaagca 60
 gatcagggag aggatggcga tagcgaaagt gattgcagcc gatgcgctgg agaccggtgg 120
 gtcctcagcg gcagcatttg ttgacttctt ggatgatctc aagattttcca tgctagatgt 180
 tatttaacct ttagtgttcg ccttgttcag cttgggtgaa tttgttttct aaatgtttaa 240
 aaacatccgg ctgattacag cgcggtgtaa acctcctcca atgcgcgcca cgctccagt 300
 acagagccac caccgctttt gcttttctact tagagcatgg gtaataatat gctcccctcg 360
 tggttaaata gactcgactc aacctgttac taac 394

<210> 1767
 <211> 440
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-D12

<400> 1767

gggtcgacgg gccagagagg catatatctc accaagatgg atcgtaaaac ggaccaagaa 60
taatccacct tggtcgtaca acctctctct tgttgttggc caaagtgatg gccgtccatg 120
cgaccccgaa gatgggctag ctgcgaata atcacgcaag tagctagtgc ccgaagacaa 180
ccactgcatg cgcgtggccc aaacatatgt atggagaggt gtggttttga gtaacaatgg 240
aacaactttg atgtggcacc gtgatttcaa actagaaatc cccacagaga gtgaggggta 300
ggtgacgatg catatgtatg ttacaccaca cttcaagcca acgacgggga ttcatatatg 360
catgcatgcg tgcatagtat atgcatcaa acttaattag gtctgaatct caccatgacc 420
tatactacgg taacacgaac 440

<210> 1768

<211> 401

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-044-Q1-E1-D2

<400> 1768

ccggtcaaga attcncgggc cgacgggggc gccaaaacgc gcagcacgcg cgcctcgcat 60
gcggtggacg tcttcgctcc actcccgtt tgtccacgcc gtggagcttc tcggcggcca 120
cgagagggcg acgccaaagt cagttcttga actcatggat gtgaaggatc tcaccctagc 180
tcatgtgaaa tctcacttgc agatgtacag gactgtgaag aataccgaaa ggccggcagc 240
ttcgtcaggt tgatggcttc gagaacgggt cggctggcga gatctgcgac gacaacttgc 300
ttgacctgcg aggcggcggg aagcccagg cagtggcacc ggccacacgg aatggaacgt 360
tanctgcaaa cgacgatgac aggagcatcg ggcgggtgc c 401

<210> 1769

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-D4

<400> 1769

accggtccta gattccccggg tcgacgggcg agccaacccg cgagctacaa cccttgggag 60
 accaccggtg ccgccccggc cccgatgatg caacagccag cagcaatgca ggaccggttc 120
 tacgggtcaa acgggtatgc ggcgccccat gcggtgcaga tggccgcat ggcccagcag 180
 cagcaggctt tcatgcttca gcagcagatg atgatggcca gccaccacc tcaggcacia 240
 caataccacc aggcacaggc ggcgccagcg aaccattcg gcgcgaacc gtttgcgccc 300
 gccggcgccc aacaccctta tggcgggcgt ggcaccggga tgatgccctt ccacgccgtc 360
 cacggcaatg cgtacaccgg gctgatctaa ccggtgggtc acagatgaaa actt 414

<210> 1770
 <211> 411
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-D8

<400> 1770

aattcgcggg tcgacgggga caggactcca agggccaagc ccctggcgag atcgtaagta 60
 tccggactcc cgaataactt catggttttt cttttcgcca cataatgtct ttctaagtgc 120
 gcatgtaacc ctgcagtccg cccaaggatg atcttctcgc ttcgtcgagc gggtccttag 180
 gtgcgctgga catggattcc ttttcgactg cctccactcc tcgtgatgcg gacgatgctg 240
 aggtgggatc ccggaaggg acccaccagg aggaggaggc cccggagggtg tcgcaggaca 300
 acctcccgga ctttgcaccg gactcggccc cgagacctaa agtggctctg gaatccggcg 360
 ggcgaccctt tcgtaagaag ggcaagaccg tgacgtggc agcctccgtt c 411

<210> 1771
 <211> 396
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-E1

<400> 1771

ccggtccaga attccccggt cgacgggaag acgcagcagt ggatgccac gcggagagga 60
 gtacgagggt tcaactggtc ggctgtggtg tgaggctgcc gtcgccgag ggcttggtta 120
 gcggtgggag tagtangggg cggtgaggcc tccgcggcag cccagcaggt cacgggaagc 180

acgagtangc gacatgaccg acgctgcttc gggcggctgg agcaagaaga ccagagggttg 240
aagaaacact acggcccggtt ggatggacat cataccgtca ctggagctag aatcgtttat 300
actgactaag ttgacacagc cctcgcctcc cgtcaactta gtacgccac aggtcagcct 360
cccactatgc gggccccagc tagcaggggg agtatt 396

<210> 1772
<211> 442
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-E12
<400> 1772

gtacgggccg agaattcacg ggctgcagag gaagaatatt tggaagatga agaagatgac 60
gaatttctga aaggtttcaa ggttgcaac ttcgagtaca tagatgaagc taaagcttta 120
gcagcaaaag aggaggcacg caaaaaagcg gaagctgaag ccgcatocaa taaagcaaac 180
tattgggaag aattattgaa agacagatgc attgagcaag aagtagaaga aattgctatg 240
ggaaaaggaa aaagaagccg caagcagatg gctgctgctg atgaggatga cattactggc 300
ctgcacgagt taagttctga agacgaggat tactcctatg atgatgatgt gtcggataat 360
gacacgagtt taccagcaaa tgtttctggg aggaaggctc agtattctaa gaaaaactca 420
cgtaatgtag attcactccc tt 442

<210> 1773
<211> 414
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-E2
<400> 1773

ccggtccagc attccgggtc gacgatcaag gcaacatact actccctgaa gacatttgtc 60
tgtcgtcttc aggcgaggtt gaagacctgg agaagcttat cgaccacgtg tccccagtc 120
tagatgacaa catgtccaat tcaaattaca tgacatctcg agcaatcctt tccactacaa 180
aggaacaatg ttgacaagat aaacatccgc atgatagagc gttttcatgg tgatgaagta 240
atctaccata gctttgacaa tgccggaggac gacccgatg gctactacgc tcaggagttt 300

ctgaatggat tgaatcctaa cggtcttcct ccacatgcac tcaagctaaa gttgaactgc 360
cctgtcatatc tgctaaggaa cattgatcca gctaattggat tgtgtaacag cact 414

<210> 1774
<211> 396
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-044-Q1-E1-E4

<400> 1774

acggtcaaaa ttcccggggtc gacgggaaat gcaaaaagct ggcaaataaa ttaaataacc 60
aagctcactc aagaaaaaca aatcgatttg cgcacggaga aggactgctc attacatatac 120
ttacacgcgg gcggtaatta tacaatacat cactcagata tgcgtacata atcctgacat 180
gtcatttagg ctagtgcaact tctcccagtt cctacatgat gcgcaaacag gctacttctc 240
acaacctatg tacatataaa catatcgtac aaagcgggtac attgcatggc ggctaagcgt 300
actcaggcgg agatgttgac gatctccttt gccctgccga ggggtgaggcg tancgaggct 360
ggggactcga cttcctcctt gctaataaggc tccata 396

<210> 1775
<211> 411
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-E5

<400> 1775

aattcgcggtc tcgactagaa aaattgatcg gtcgaagact ccatgatatac cgctccagct 60
tcatcaacat agtcatcatc gccatcgtcg ggggtccgagt cggtgtcgtc gatgatgatg 120
tagttctccg ggcaagtgga accgtcatct cctcctctgg gcgcgggggtc tcccatgaac 180
actcctagct tccttgtcag gtcgtcattc ttctccacta atacgacgct ttctcctca 240
taatctttgc gtgcaacctt gagttcttcc tccagttccg tgatccttgt catgccttc 300
ttcaaactcg tcatgcctgc gcacatctgg ttctcctggc gtcgaatgtg ctagtttaac 360
tcctggatga aagctgcaat cgatctatcc ttctggtgc tgatcatctc c 411

<210> 1776
 <211> 420
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-E7

<400> 1776

gtaccggact agaattcgcg ggtcgacggg catgacaaca tgatctccat catcttgatc 60
 tatatcaatg tttcgtcaca tggtcgtctc gccaaactatt gctcttgcaa ctattgctat 120
 cgcatagcga taaactaaag caattatttg gcgcttgcat cttatgcaat aaagagacaa 180
 ccataaggct tctaccagtt gctgataact tcaacaaaac atgatcatct catacaacaa 240
 cttatatctc atcacgtatt gaccatatca catcacaaca agccctgcaa aaacaagtta 300
 gacgtcctct actttgttgt tgcaagtttt acgtggctgc tacggggtga gcaagaaccg 360
 ttcttaccta tgcataaaaa ccataacgat atttcgtcaa gttagtgatg ttttaaccct 420

<210> 1777
 <211> 403
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-F1

<400> 1777

gggccagcat tccccgggtcg acgggtcgat gaatgatttg agatatggag gcagtgatat 60
 taaagttatg ctagttgagt agttgtgaat ttgagaaata cttgtgttga agtttgcaaa 120
 tcccgtagca tgcaggtatg gtaaacgttg tgtaacaaat ttgaaacatg aggtgttctc 180
 tgattgtcct ctttatgagt ggcggtcggg gacgagcgat ggtcttttcc taccaatcta 240
 cccccctagg agcatgcgcg tagttcttgg tttttgatga cttgtagatt tttgcaataa 300
 gtatgtgagt tctttatgac aaatgctgag tccatggatt atacgcactc tcacccttcc 360
 atcattgcta gcctcttcgg tactgtgcat tgcnctttct cac 403

<210> 1778
 <211> 247
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-F11

<400> 1778

gggtcgacgg ggaagtccgc cgccaaggag ggcggcgaca agaagggcaa gaagaaggcc 60
aagaagagcg tggagacgta caagatctac atcttcaagg tgctgaagca tgttcacccc 120
gacatcggca tctcctccaa aggcatgtcc atcatgaact ccttcatcaa ccaaattctc 180
gagaagctct ccggcgaagc cgccaagctg gagcggtaaa acaagaatcc caacaatcag 240
ttccccgg 247

<210> 1779

<211> 226

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-F2

<400> 1779

cggtccagaa ttccccgggc gacgggggta ggaagaagtg gggtggtggt gtcattgggct 60
ccaagtcgca agcgacgacc aaggccaggg aaaggcttat cgcaaaggac gctgcgccagc 120
ggatgaacta agtttagcat tgttgaacca tatctattcc tcatccttga gtagtggttca 180
agcatactgt ggctgtttgg ctccagtttt gggaatcaat tttggt 226

<210> 1780

<211> 319

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-F3

<400> 1780

accggtccag cattccccggg tcgacgggga tagtaataaa tgacctgcag tacgtggtgc 60
agctggatga cagcaccctg atcgagcact atgccatcta caacttggtg cgcacggctc 120
ccatggccag ctacatgcat ggggtgggaca cgctcgtgac cacctagctc gacaagcgtg 180
aacatccggc cgcacctcgg ctgcgtcaag aacactttcc tccacgcgct caagatgctg 240
ccgcacggca tggacaatta gtacagctcc ctttagttca cctcgtcgc gatcatcgtg 300
ggagcttgag agctgctgg 319

<210> 1781
 <211> 402
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-G1

<400> 1781

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cgggtccaga attcccgggt cgacgacctt gtttggaccg aggaggacac atgcatacta 60
gcttggagga aatgacaaac ctgtttgtgt aattaaaatt acatgaacca ttttttaaac 120
ctacgcaagc tttttaaaat tatgtggaca tttttcttaa tacgtgaaca ttattttaca 180
atacatgaat attttaatta tttaaacata ttgtaatcta taattttcat cgaaattaca 240
aaacacaaat ctgtactggg tcgcagtgat ccagacggg agtcctatt tggcaccatg 300
tgtgttggga aaccagccaa cgcaccccat cgcttcccgt gcgcaatatt gggctggccc 360
atgtgtatgg taggaacacc agtttcattc atttcatttt tt 402
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<210> 1782
 <211> 463
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-G12

<400> 1782

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gtaccggtcc taaattcncg ggtcgacgga caatcatgag gatgtggacc catttgcgat 60
ggaaagtgat gacgtggatc ccatgcaaga ggatttgcta aatgaaatat acgaaaagac 120
agccgatgaa cctgtactaa gatctggcga tggaggcgct gaacaacccg tggctccaag 180
agaggcagag aagcatcaag atggagagga tgggtggcga agcaagccaa gcaaagttga 240
gctgacggag gacgagaagg cgcgcatgga ggctaacagg ctcaaggcgc tagagagagc 300
ggcagcagct cgggctcgcg cgtcccagtc gctgcctact actgaaacta ccacctgaaa 360
gcgtgcaggg ttttgaatca ctccgccttg catgtttggg cgtgtaagca tagatggtgt 420
gtttcatgga gatggtgttc gttgaaattg aggtgttaaa tcc 463
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<210> 1783

<211> 316
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-G3

 <400> 1783

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 acaatacgcc agggaaaagt tggtaaaata aaaaagttaa taaccaacca aaacgaacca 120
 aaataaaaatt aaaattaaaa ttccgccgga tccttttcgg caattcaagg gtaacaaggg 180
 aaacggcaaaa ttccgggggcc ccccaaaaaa aaggccgctt ggggatcaaa aactttctcaa 240
 atagcagcta gctaaattga gtccttcatg tttcaciaaac aaaggaaaat tcaatttcga 300
 gacatgtgct taaaca 316

<210> 1784
 <211> 425
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-G5

 <400> 1784

 aggtaccgga ctagaattcc cgggtcgacg ggttgccta agcttggggg tgctatgatt 60
 aatgaagata atcttgtag taccgtact tttaatgaac aaatttgta tgatgacatc 120
 atgcctcta tttatgatga tcacaatgat gaaagtgggt ttcgaagagt ataaaatcta 180
 ggtattaatg atcccactaa tttggagggt gttgaatctt attacaataa tgacaaaagt 240
 ggatttgag aggtcttgac tttatacagt gatgaatcca ctactttgga agaggtttca 300
 attgattatg acaacaaagt tgctatctat gatgattatg gtaatgatat gtatgctata 360
 aagagtaata ataaccatga aacttgtcac catgatttta atgttcaatt tggttatgtc 420
 aatca 425

<210> 1785
 <211> 452
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-G6

<400> 1785

aattccccggg tcgacgggca tgcccaaaga aagttatccc tataaaatca tatagtctgg 60

ctatgctcta tcttcaccac acaaagtatt taaatcatgc acaaccccgga tgacaagcca 120

agcaattggt tcatactttt gacgtttctca aactttttca atcttcacgc aatacatgag 180

cgtgagccat ggacatagca ctatatgtgg aatagaatgg tggttgtgga gaagacaaaa 240

agggagaaga tagtctcaca tcaactaggc gtaccaacgg gctatggaga tgcccatcaa 300

tagatatcaa tgtgagtgag tagattgcc a tgcaacggat gcactagagc tataagtata 360

tgaaagctcc acaaaagaaa ctaagtgggt gtggatccaa ctcgcttgct caagaagaac 420

taagggaatt ttgaggaagc ccatcattgg aa 452

<210> 1786

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-G8

<400> 1786

agaattcgcg ggtcgacggg cactacaggg tctggggcag cacgaaggac tccttggtcg 60

aactcgctc gccatcatc gaccctact acgaaaagat gaagcaggat gccagagaa 120

caagtcccct atcctggcac agggcctgga tgtggcaact ggatgaacc acctcaggtt 180

cgaggccaag tgcgtgtaca catgctacga ggtgcacagg cagatcggtg acatgaggaa 240

gtgcctcgta accaaaatcg atgagcccag atcaagccac aagcagagca agcgtcacia 300

gaagtagatg atgatcagat gatcgtttat gctagttaat catgcatgta atatatagtt 360

tactttattg gtgtgttgaa atgtcatgtg tgtagtatcc acct 404

<210> 1787

<211> 363

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-044-Q1-E1-G9

<400> 1787

cggtcgacg ggtctaacia gctttgaggt aagaatttta atatttataa aatagtaccg 60

catagacagt agccccctgat gcttggttcg gtgtttggaa agaaaagccg gactgaggat 120
 ctaaaaagat atacgcagga gtcttaaana aatatttcaa tatgggattg caagcttccc 180
 tgctgaactt caacggccct aactgcgaag gcaattgctt tgaaccaaac cctcaagcgg 240
 tccgaaaaca acccctccgt tgcaaaaaac aacttcaagg acaaggaagg taattaaaac 300
 cttattaaat ttgtacctta caaaaaagga tttggttgca aaaggaatga caaggataac 360
 ttg 363

<210> 1788
 <211> 390
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-H1

<400> 1788

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 tgtagccgtg tgcgatgcag cacacactaa attctttcgc acatgtggta tcggtgatta 120
 agcgtttcta atgacgtagt gaaaccatac ggtttgttgt tacgaaccgt ttaggaaata 180
 gtatgtaagg cacacgggcc aacatatgaa ctgtgtgcga tttgtgcccg atcgcacaca 240
 agttttctat gtaacccgcc tgccatgcta gactccatcg cacacgtttt ccaacaatta 300
 ccgtccgcga taatgttcta tcaaaaatgg ttcaggagcc ctttcgcaca catacaagtg 360
 ttgcagaccg aaaaaaaca cagaagaacc 390

<210> 1789
 <211> 299
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-H3

<400> 1789

cgggtccagca ttcccgggtc gacgngtca ngaagnaatg gggcggtggt gtcatgggct 60
 ccaagtcgca agccaagaca aaggcaagga aaaggtcaac ccaaaggagg ttcccaaaag 120
 gatgaactaa gccaacctt aaatttcaaa acatatccaa tgtattttcc ctttcagtgt 180

gtcctaattt tgacaaggaa ctcaaaccct tttaccacaa ctgtggaacc taattgtggt 240
 tttctgattc tctgttccgt tcgcaagact atatcaaaga taagatgagg tttaccgg 299

<210> 1790
 <211> 416
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-H5

<400> 1790

gtaccggatc agaattcccg ggtcgacggg gggggggggc gccacctccc cttggcctgc 60
 ctctctcttt cccgtatggt ctaataaggc ccattacttc tctcagtga ttcccgtaac 120
 tccccggtag tccgaaaaat acccaaata ctcggaacct ttccaatgtc cgaatatagc 180
 cttccaatat atcaatcttt atgtctcgac catttcagga ctctctgtca tgtccgtgat 240
 ctcatctggg actccgaaca aacttcgggc atcaaaaaca taactcataa taaaaatcat 300
 cattgaacgt taagcgtgcg gacctacgg gtttgagaac tatgcaaaca tgatcgagac 360
 acatctccga tcaataacca atagcggaac ctagatgctc atattggctc ctacat 416

<210> 1791
 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-H9

<400> 1791

cgggtcgacg ggagatggtg atattagagt catgctagtg ggtagttgtg gattagtata 60
 aatacttgtg ttgaggattg tgtttcccg agcatgcacg tatggtgaac cgttatgtaa 120
 caaagtcgga gcatgaggta tttaatgatt gtcctactta tgggtggcgg tcggggacga 180
 acgatggtat tttctacca atctatcccc ttaagggcat gcctagtagt acctttgctt 240
 caagggcaaa taaacttttc aataagtatg tgagttcctt atgactaatg tttactccac 300
 gggttataag caatcccacc cttccatcat tgctaacctc tctagtaccg cacaactttc 360
 accggtacca taaaccacc atataccttc ctcaaaacag ccaccatacc tacctatcat 420
 ggcatt 426

<210> 1792
 <211> 329
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-A1

<400> 1792

taccggtctt gaattaccgg gccgacgggg atcagtaatt cctctcctgc ttctccacaa 60
 atcgctcgg actctcgca gagcaaccaa cctactcgcg ccggatccac accggcgctt 120
 cgaggcccaa tgggcgagaa tctcttcgag gagatcttca acatgcatga ggatcgaacc 180
 cagaaggga gagattcaac acagtgactc gcattgacgc cacaagtgga tacttgctta 240
 tgtacacgta catacaaagt ccaaccgctg tcaaactatc gcatatgggt aactcattca 300
 ccatcgtttt acatcctaca cagagtcag 329

<210> 1793
 <211> 399
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-A12

<400> 1793

attcgcggt cgacgggtat gacggctcta ctttcagatg ttcagtcag aagggttact 60
 cttatatatt acagtttgac cagtagaaaa gagacattgt tatctctatg ggttgggggtg 120
 gcactctatc cattccactg attagcaagt tgagcgtcag acatatgggt tggcttttac 180
 ggatggtgga tgatgtcaga caagccatta tcttggggcc gaataaggta tttaagttca 240
 acgagagcga cgttgagaag atatacgga tcccggcagc tggaacagat gtgatggaca 300
 aaacccatga ataatggta tatacgcgta caaagaaccg attaatggta tatgaatcca 360
 gaaactcatt atattaccta tcatgtttgc aagcacctg 399

<210> 1794
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-045-Q1-E1-A2

<400> 1794

ggtaagaat acccggtcg accggcggg caaaggccgc ccgaagaaa ctgagagccc 60
ggctgaaagc tcgggacgag gtgggaagag gggccgaggc agaccccgga agtcttagac 120
ctctccggcg agcctttttg gtgaaatcag gtcaagcgat atctaacc tgatatgatg 180
tgatccagcc cggccattcg acagtactct ctgactgcct gctattcgag agattttttc 240
cgtgtagtgg taatcttgtg attgtgagcc tgtaatgtta gcatgcgcaa ccgtattatt 300
cattggtgac cgtgagtga tttttctgct caaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360
aaaaaaaaa aaaaaaaaaa aaanaaaaaa agaaaaaaaa aaaaaaaaaa aaaaaaaaaa 420
aagggggcgc cccaaagggt 440

<210> 1795

<211> 392

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-A6

<400> 1795

aattcccggy tcgacgcga tgaaaattgg gtggatcttg gcaggaccgc gaggcaagag 60
atcgaggga agcaaggaag tacctaagct acacatgacg ctaggaccga acacgggatg 120
accacctctg actccattgg gaccgggaga atgcacatac tccctctgtt taaaaatata 180
aaatgttttg aatatttcaa tatagactat acatggatga aaatgagtga tcaaagacac 240
caaaacatgt ctatatacat ttaattcaga aaaaatctag aagatcttat atttgtgaat 300
ggaggggagta ctatcggtgt ccttccttaa gttagaggtg cacgtgaatc cctttcctcc 360
tcaagatttt tgttcacctc gtgatcctca tg 392

<210> 1796

<211> 394

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-A8

<400> 1796

attccccgggt cgacgggggat ctaaacttgt atccattcct caatacgcga gggcgtgcaa 60
ctttcagttt gctttctgtgg cgtgtgaagg cttgtgccac cgcagcaatt aaccaaggaa 120
aggaaggaaa ttggatcccg agaattgctgt agactgatct atgggttaat tagagattcc 180
aaacggagct gctgatgttt gaaggattga tttgattcat catgcctgca ccggaggaga 240
tcaagatcca cgcacaaaac atcgatgctg cagcaagaga gataattggc attttggagg 300
atacaagcat aggaaatgtg atcttcgtcc gtggttggcg tggatttggg gcatacgcgg 360
cactcaaggc agtagcaciaa cgcctgaaat catc 394

<210> 1797
<211> 416
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-B10
<400> 1797

ttccccgggtc gacggggggtc cgtatacgac cccgttctcg ggatctgctg ccatttctgc 60
aggcagaaga aactctgcgg cgaggagggc tgcaagcgct gtggggaagg agactttgag 120
cagcaatgca tagggaagac ggagtgtcc tcttgccatt cctcctatgg gatcctctgc 180
cgtgcttgcc ttaaagttag gtacggtgaa gagatggaag aggtcaggaa gaacaagaag 240
tggatgtgcc ctactgtgt tgaggagaag ggtaccaaga aattctggat atgcaacagc 300
tccatctgct tgaagaagag gaagatagca ccaaccggga tcgcatatt ccaagcgcgt 360
gagcaaggat atgcgtcggc cgcacacctt ctcatggacc agctgaagag ccgcgg 416

<210> 1798
<211> 418
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-B11
<400> 1798

gacgggggaaa cgaaagaaca aaagagcttg cgcaagaaca cgtaaacctt ggggtcaaag 60
ccatcgaatc tctcccaggc agtgacgatg aagatgttct gatttcaagg cgcgctctta 120
ttgatatcac acagagagtc atcacaagga caaatagca tgattatata cagggtggag 180

aagataaggc ggagtttcac cacaggtgta gtgttccgct tggaaatfff tggtcgcctt 240
 ggtcattgca ttctttccat tgcccgggtt ttgtgtaaca tttgatgaga cttcagggtta 300
 accattcctg ggaatcatcc taagtcgcag ctgtagtgggt tttagttact ggtggcagca 360
 gaatctgtgt attaatatca cgattggcga ttgcacgatg acctgatcat aagactgt 418

<210> 1799
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-B7

<400> 1799

attccccgggt cgacgggata tctatcggag tagtttgta tttgctctag tgcttcactt 60
 atatctttta gagcatgggtg gtagttttat tttgaagaaa tagatgaact ctcattgcttc 120
 acttagatta ttttgagagt cttaatagca tggtaatttg cttaaaatcc taatatgcta 180
 ggtattcaag aataacaaaa ctttcttatg agtgtgttga atactaagag aagtttgatg 240
 cttgatgatt gttttgagat atgggggtaa taatatcaaa gtcgtgctag ttgattagtg 300
 tgaaattgag aaatgcttgt gctgaagttt gcaagtcccg tagcatgcac atatgataaa 360
 tgttgtgtaa caaatgtgaa acatgagggtg ttatttgatt gtcctcctta tgag 414

<210> 1800
 <211> 340
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-B8

<400> 1800

gacgggctag tggatacaga aagttgcaac ggtggaatta ggtttttggc tctgttctg 60
 atcgtttggg ggtacgtgtg tatatctagg aggaagaagt acgccggacg agcaacaagg 120
 ggcccacgac gcaggggggc tctcaatttg cttgggatcc taatatgcta tgtattcaac 180
 aataacacca ctttcctatg actgtgtcga atacatctag aactttgata cttgatgatt 240
 gttttgaaat attgcggtaa taatatcaat gtcattgctcc ttgattactg tgaacttaat 300
 aaatgcttgt gctgaaatft gcaagtcccg taccattcac 340

<210> 1801
 <211> 298
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-045-Q1-E1-B9

 <400> 1801

 cggggatatg gatggtgact tccccggtgg cgaatccgaa atctccgaag cgagcgattc 60
 taataatcgc aacgctattg acaccacttc gaatcacaga tgtgattggt gatgagaatg 120
 gcgaggataa taaagagtat gcagacgatc aggccgctgc atcaggtgac aacaattata 180
 actatcacca cagtcactat gattctgggg actactacta tcattactat catctctctg 240
 ctgtcgacga tagacatcga gtcttatagg aggatgatta ctatgaggat gacgacga 298

<210> 1802
 <211> 402
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-045-Q1-E1-C1

 <400> 1802

 ggtccagaat acccggtcg accgggaaga agaccaaggc cgagaagcgg ccgccgaagt 60
 ccaaggaggg cggcgccgac aagaagaaga agaaggccaa gaagagcgtg gagacgtaca 120
 agatctacat cttcaagggtg ctgaagcagg tgcacccgga catcggcatc tctccaagg 180
 ccatgtccat catgaactcc ttcacaaacg acatcttcga gaagctggcc ggcgagtcgg 240
 ccaagctggc gcgctacaac aagaagccca ccatcacgtc ncgcgagatc tagacctccg 300
 tccgcctcgt cctccccggc gagctcgcca agcacgccgt ctccgagggc accaaggccg 360
 tcaccaagtt cacctccgcc tgattcggtc ctgtccctgt gt 402

<210> 1803
 <211> 396
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-045-Q1-E1-C10

 <400> 1803

attcgcgggt cgaccacgta ttcgacgaaa aaaatatatg cggccaatgc atggctatga 60
acgtcttctt gtgtgggttaa atatgtgcac gtgtactcta taccgaggag cattttcgca 120
caggatcttc cttgcgtgag gtacagaagg tggccaagca caagacgacg cgaagcactc 180
gttaaaaaaga aaggaaaaac gagctgggtt ccgcacctga ctgctctagg ttcgttcgga 240
gctagcggtc agatccgtca cgatggatgt acagaacctg catcgacgag ccgactgggtg 300
tcaggtgagg ttgaaacagc ctgtaacgtg gttagtacct cgaggaaccg gcgcgtgtgc 360
ttttcgaaag aagtggaacc tgtggtagac gtgatc 396

<210> 1804
<211> 425
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-C11
<400> 1804

attccccgggt cgacgggtcg gtgaatctca tgatctggaa ctgcaccacc cccggaaagc 60
aggggactga ttgggaaagt ggatactacc cacttactct ccatttcagt gaggactacc 120
ctagcaaacc tccaagtgc aagtccccgc agggtttttt ccacccaaat gtctatcctt 180
cagggaagggt ctgcctctcg attcttaatg aggatagtgg ttggagacct gccatcactg 240
ttaagcagat tctagttgga atacaggatt tgcttgatca acctaatcca gctgatcctg 300
cccagactga tggttatcac ctctttatcc aggatccagc agagtacaag agacgcattc 360
ggctgcaggc caagcagtac cctgctctgg tttgaggatt catgtaacag tctaaaatca 420
taaatt 425

<210> 1805
<211> 228
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-C2
<400> 1805

ggtcacagaat acccgggtcg acctcatctc ccacggctgc ggtggctgcc gcgctcacga 60
tcacaacatt gcgcaatata cggatcggaa tccggacgtg ctgttcctgc aagtcagcta 120

caataagcag aggtccatgt gctacagcct cgatgtccat gtcgtcgcat gcgacaggct 180
ctacacggga gctcatggca gggtcagcag cttcagctgc accaatgc 228

<210> 1806
<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-C6

<400> 1806

gtaccagtct agaattcccg ggctcgacggg tctcacaatg tgtacggttc gtgtagagag 60
agcttgccaa catggagcag ataaggcagg acagatcgta tgtacgttga cgaaagcgctc 120
ggatacagcc ctaatgacac atacagagac tgataaagag acaccgagag aggaagaagt 180
taggtctgtg acatagatgg agacatgtaa tatacttgag atacgtttgc atcgggtattc 240
tgttcacatc gacggagaag acacaccagg tttgatcaca tagctcgaca cgcattgacg 300
agaggggaag gatctcgtgg gttgagggat tgataatttt gtgcgggtga tagagggata 360
ggtaattctg tgcaagagac agatgagggg ggagtcagtc agctgtcgtc ccatac 415

<210> 1807
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-C7

<400> 1807

aattcccggg ccgacgggaa aggtgagatg agaagtttgc ttgagagaag ttaatgagta 60
atgccatttc taagaagagc accagctgtg acgctactgc tcaccgtcag aagatgggctc 120
gatgcagaag ttggaaaggt ggatgagagg ctttaattac tttgcaactc tgccatcatga 180
gctccatcag cccaacaagt cggttcctgc ctttcacatgc tcgcttttagc agcgaccctg 240
cttgatggcc agacctcatg cggcagcagg gcagggcagc acgggttctc ggtagattgt 300
gatcgagggc ctagcacgaa gattcccagt cgccggtggg tgtaaagggc aaaaccctg 360
gagcagattt tgtcaatgga caagtggaga ctgctatgct agttcatggg aaaatacaga 420
atga 424

<210> 1808
 <211> 401
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-045-Q1-E1-C8

 <400> 1808

 aattcccgagg cgcacgggac aagataaaca acaagctgca gcttggtcatg aagagcggca 60
 agtacacgct cggctacaag accgtcctca ggaccctcag gaactccaag gcaaagcttg 120
 tgatccttgc taacaactgc cctccgctcc gcaagtctga gattgagtac tatgctatgt 180
 tggcgacgat cactgtccac cactaccatg gaaacaatgt tgatttggga actgcggtgtg 240
 gtaaatactt ccgagtctgc tgcctgagta tcatcgaccc tggcgattcc gacatcatca 300
 acgcaacacc agctggccag taaacctgtg tatgccatth tcagtgtctc gtctgatgcg 360
 tcatctaagg tggttctaga gtgtagttcc tgctggactt g 401

<210> 1809
 <211> 398
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-045-Q1-E1-C9

 <400> 1809

 attcccgagg cgacggggaa gaagcacaag gcggagaagc gggcgccggc gtccaaggag 60
 gccggcgagg aggcgaagca gcggggcagg aagaagggca gcaaggcgaa gaagagcgtg 120
 gagacgtaca agatctgcat cttcaagggtg ttgaagcagg tgcaccogga cgtgggcate 180
 tcctccaagg ccatgtccat catgaactcc ttcacaaagc acatcttoga gaagctcgcc 240
 ggggagtcgg ccaagctggc ccgctacaac aagaagccca ccatcacgtc ccgggagatc 300
 cagacctccg tccgcctcgt cctccccggg gagctcgcca agcacgcgt ctccgagggc 360
 accaaggccg tcaccaagtt cacctctctc tagacaac 398

<210> 1810
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-D11

<400> 1810

gtaccgatcc agaattcgcc gggtcgacgg ggatcaagaa accactttga caaaactctg 60
tttgggttaa atccttcgaa gaaccacttt attagacgcc tgaccctcgc tccattgtat 120
gggcatcggc atggttctgt ctgccgtggg catgctcagt gccgagagct gtacatcgcc 180
gctagcggcg cctccatgtc catggagcat cgtgtcactg ctattggtgt tctagctagt 240
gccacaagct gcggcggttg gcctctcgga aggcgttcaa tcagctgagc cagatggcgt 300
tccgatacaa attgttcatt tagaacatgc ccagcattgc cagctcgcta ctgttctgtg 360
gccaggcgct atcaaaacta ccaaagcagg ctctgtgca cttgaggagg gtcagggtga 420
ccaaaccggc ttggttta 438

<210> 1811

<211> 410

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-D4

<400> 1811

cgggtcgacg ggcaagctca caccaacgag gttagcaagg gcaaaccact agattggatt 60
tcaggacaac cagtcgcaga tgagcatgaa tgctccaga ttataaagaa tgatgacctc 120
gaagagctcc aagaactcgg ttctggaact tttggaactg tatatcatgg taaatggagg 180
ggctctgatg ttgcaataaa aagaatcaat gacagatgtt ttgctgggaa gccatctgag 240
caagaaaaaa tgcggaatga cttctggaat gaagcatcta accttgctga tctgcaccac 300
ccaatgttg tggcctttta cggcggttgg ctagatgggc ctgggggatc cattgcaacg 360
gttacagaat atatggttaa tggctcactt aggacggctt tgctgaagaa 410

<210> 1812

<211> 406

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-D7

<400> 1812

aattcgcggg tcgacggggg agatcagaca ggcagccttt gaatgccttg tggcaattgc 60
atccacatat tatgcgcact tagatcctta tatgcaaacc atattcaacc tgacagctaa 120
tgctgtcaaa ggagatgagg aaccagttgc actgcaggct gttgagttct ggagtactat 180
ttgtgaggaa gagattgaac tccaagagga atatgagggg tctgatgatg ctaactcaac 240
tgtaaattat cgtttcattg agaaggccct cccttcactt gttccaatgc tgctagaaac 300
tctgttgaag caagaggaag atcaagagca agatgataat gcttggaaca tttccatgag 360
tggcggaaca tgccttggac tcattgctag aactgttggg gatgca 406

<210> 1813
<211> 439
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-D8
<400> 1813

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aagacgggac acctttgcct ctatcaagtg gtatcagatt tccagggtgc tcggtgagat 120
tttacagttt ttcgtagttt agatcgagtc tgttcttcat acctacagtc cacgaaaaag 180
ccacacaaaa aaaatttagg gttagttcat catatccgaa ccaatctgag cctttgcata 240
atcttttttag ggttttgctt tgttgaattt gcggttgcac cgctcgtgtct agttactggt 300
cttagagtct agtcttttag agtttcgagt tttggtcata agttgtcacg ccgccgccgc 360
accatcatca tcgcccctgc catctaccac caccgctccg aattcatatc gatatacgaa 420
cacgcgtac aacaacggc 439

<210> 1814
<211> 290
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-E10
<400> 1814

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ggtcagctgc ttcacaaacc accgcttgat cgcaaaaggc aacaccgcga atcagattgt 120

gaaaaccatc acgatccagt gctacctcgt gctaaggcac gtccacccgc aggtgcacac 180
tctcgtgaa ggttctctgc atcacctctc cactgattcc gcagacctgc tatatgctcc 240
ccggtgagtc gtccaaccta gactcctcca acaggtcacg gagcatcaac 290

<210> 1815
<211> 387
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-E11
<400> 1815

attcccgggt cgacggggta cgaggatgag cctccagagg ctgatattga ggaaggggtt 60
gaagaagatc ctgagaacaa cgaggatgcc cctgatgacg tggtaggggg tgaaggtgaa 120
gaaaaggaac aggaaaagac tgcccgtcca cgcaatacaa caaaatatat gaccaagtat 180
gagcgggcac gcatccttgg cacacgtgct ttgcagataa gcatgaatgc cccagttatg 240
gttgagcttg aggggtgaaac tgatcctctt gagattgcca tgaaagaact gagagcacgt 300
aagatcccct tcacgattag gcgctactta cctgatggaa gctacgagga ctggggagtt 360
gacgagctca ttgtggagga ctctgtgg 387

<210> 1816
<211> 403
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-E5
<400> 1816

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ggagaaggta ccgtgaagaa gcccaatgag aatgagtact cagaattcgg tagccagata 120
actgatgtgt aacaagctac agtcgtataa catgccttgt tggagctgaa gcctgagaag 180
tgtgtttcgc tgggtatcta ggggtactaaa gtgggtttctc ttttggactc atcattatgg 240
ttgtaatagt cgatgaagaa tcatatttta ctaattttat ctgcagaacg ttttttgcgc 300
gaaatacaat ggccgtccgt tgggtccctg atacgtctcc aacgtatcta taatttatga 360
agcattcatg ctatttgatt atctgttttg gatgtttatg ggc 403

<210> 1817
 <211> 400
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-045-Q1-E1-E6

 <400> 1817

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 cgcaccaggg tcaccttcta cagctcctac taccacacca aggtcaccga cggcgtctcg 120
 ctctgcggcc ccgtgctcga ccaggtcaag atcatgccgc tcaagctcta gtcgtccatc 180
 ggagtagacc agaagctcag atcaatcctg tcgcgttgat tcggcatcgt cctctcgtct 240
 actatgtagt agtagtgggt atgtaatttg tgacattgat ggacctctct ctaatcgtgt 300
 gccagcgtgg tggaatgaat tgcctgtgct gtgcgtgaaa cagaagaaag agagggacgg 360
 atgaaaaaaaa agcggcccgct ctacaggatc caagcttacc 400

<210> 1818
 <211> 403
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-045-Q1-E1-E8

 <400> 1818

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 gttgctgctc caacagttga gcctctcgac cagcgcgcac tactaataag ggataaattc 180
 agtgctgatg gttggctttg tccgcgttgt tatcaagtac acaaccccat agacaatcta 240
 ctctataggg ttccagcttt cgagtgtact aatcccgaga agtgcaatgc taagtgcctt 300
 gagacagttg aattgagcat tactgactgc ataatgaata ccgtcaggac caattttctg 360
 attagaagtc aaggctataa ccggaactgc acagcacatg cag 403

<210> 1819
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-045-Q1-E1-F1

<400> 1819

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 gatagcaaac tccaaaacat gagctggttt tgctacacac gtgtgaacac gatgtcctag 120
 acaagcatga ccacgtggta gtcttacaat aaaacactat cgagttcagg ttgggaacca 180
 tcaacgaggg tatogaagtc cttacataag tccggattag atcttatgaa ggaactcctt 240
 ctcttgaac aaatcaatca gtggcttgggt gtgctangga tacatataga ttgaagggtg 300
 caagtcttca aaccacagaa ttcttcgcac gtgtgcatgc ctgatttgga atgattccaa 360
 agaaagcaac attgactttc tcgaaatcac ggcggcaact tgcattcagac gcacatga 418

<210> 1820
 <211> 397
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-F12

<400> 1820

aatgccccggg tcgacgggca ggattgacga gtgggcaatg gaaatgtcga gctttggcct 60
 caagtttgag agcacttcga ctatccaaag cagagcattg gcaaagttca tagcagagtg 120
 gacgccaaca caagatgaag aaattccaga aacaagcatc cccgtcaagg aagcaagcaa 180
 agagtggctg atgtacttcg atggtgactt ttcgctgcaa ggcgccggtg tgggcgtgct 240
 acttgctcga cccaccggag aacacctcaa gtacgtagtc cagatgcact ttcccaagga 300
 gcaagcaacg aacaatacta cagagtatga aggtttgctt gccggtctca ggatcgcagc 360
 agaccttggg atcaagaagc tcattgtaag ggtgact 397

<210> 1821
 <211> 382
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-F7

<400> 1821

gggccgacgg gatacggtag tcagaccaag cccgttttcc acaagaaggc aaaaaccacc 60
 aagaagattg tgctgaagct gcagtgccag agctgcaagc actactccca gcgcgccatc 120
 aagcggtgca agcattttga gatcgggtgga gacaagaagg acaaggggaac gtctctcttc 180
 tagattgctt tcacctatct ggagtcgttg tggtaagaa ctattactac ttgtcttgat 240
 gtttttgatg ttatgagttg aattgaccag accttcta atgtatccaaac ccctttatct 300
 ggcatttgag caaggaccga cttggcgaaa aaaaaaaaaa aaaaaaaaaa aaaaaaagcg 360
 gccgctctag aggatccaag ct 382

<210> 1822
 <211> 411
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-F8

<400> 1822

attcccgggc cgacgggcaa atctacagca ttgtccattt catgctccac taaagcaagt 60
 actatgtgaa aagttttgct tgccccactg ttaacttacc acaatcagtc atcatcaatt 120
 tgaacgccgc acttaataca ttacgcgata ttcgacaaac ccgtcggcta agcacacact 180
 ctctgctaaa acacatacac atatcagcat tcgatgagtt gacgttctat gatcactaat 240
 aaagcagatg ggtcaagtat tcattgatat aacaaaatgc actgctttgt ggagactgta 300
 ttgggggggca atacaccatc gtttaacatg acatgtgctt aattagctgc acgcttggct 360
 gcaaattacg cgcgaaagta tgggggatca atacgatata ctcaactttt a 411

<210> 1823
 <211> 399
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-G10

<400> 1823

attcccgggt cgacgggggg ggggaggggc aggggcgttg ggagcatctt tctcctacct 60
 ttagccctag gttacccgat tggtgagagc ggcgaccggt tgggaaaaat ctgcagcgac 120
 taggcgactg cgtgctaggg taggcatgga gttcttgatg cagcccgtaa ataggcagca 180

ggactctaataaagaagaggtaacgagaacaagatgaacatggagcctcttcattaccctg240
tgagtctatgacgacggggcggtggtggaattgccggccaaacacggaatcaagcgccaa300
cgaccagatttgcactgagggcgctgttccaaagggcaggcagtgacagacaacctcaagct360
tcagagcactccatcgaacagggtccgggttggggcaac399

<210> 1824
<211> 421
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-G3
<400> 1824

cggtccagaaatccccgggtgacgggctcgaccacaacgcgctcggttgcgcgcgggtga60
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gtgtccgtaccttgagagtgcttttttctgatgcggattgtttttaaggatattcaag180
gtgaaatacagcagatgaggaggagggggatgagaaagacaggcaaatacgatctctcg240
ttgaagatgcataaagaaaagtcgggtcaaaccacattagaatcaagcaattcgaccatg300
ataaagagctgatgcgtcgattcttttcaggatgcaaagaaaacttaagaagtcttctg360
atgcatttcggagtataagaagatgtgtgaaggaagtggcgtgtcatcttcgggtgttg420
t421

<210> 1825
<211> 392
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-G7
<400> 1825

gggccgacgggaaaaagatcgaatgcatgagacgaacacgtatgcaaatagcaatgcaca60
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ccgaggaaataaattaacttaacgccggaaacggcaagagttggagtacaattgggaaa180
gttatatccgggtgttacaacctccaccactacgaaagatctcgtctcgagatctag240
gactgaaagaacaccgggtactcagaacggaggtgacctcgcgttcccaaggtagcttca300

cggtcggaaat ggtgtgacca cttgactttg agaaatttga ttgacttggt gcgagtcttg 360
cgttcagtct cttcaagaat agcaactggg tg 392

<210> 1826
<211> 405
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-H1

<400> 1826

cggtccagaa ttcccgggtc gacgggggtc gtcaatcagc gccgcgggtc acccccatgc 60
gaccctagct tcgctcgtc tccggcgtag cttctccctt ttccctgccg cggcggatct 120
gcgtcggcat ttgacggcgg ggagctgaca ttacaggcct ggtctgcacc aatggaggca 180
atgcgcaaaa aggaggcaac agcaacggct tgttctgaag acaaccgtaa aggtgtacat 240
ggtgtatcca tgaatgggct atacgatact tggaatcctg cctaccctcc acgtgatact 300
agtcctatgc atgtgacat ggctgctcat atcgcatcag tcaaggagtg gatggacaaa 360
acacaggcta tacttgctaa ctccagagca accaatataa tcata 405

<210> 1827
<211> 325
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-H10

<400> 1827

cccggtcga cggggaagag gagctgtacg aggacgagga cgacgccgac ctccaggagt 60
aggggcgtgc gaggtctggg ttcttctgtg atcgcggtgc tgctcagtcg ggggctatct 120
ctgatggctc catgttgctg ctactagtag tgtgtgtgtg tgtgtttcgc gcttgctggc 180
ccccatcttc ggggtgtcgt ggacttggtg cttgtgtagt ttgtctgtgt cgggttaatt 240
cggtagtcag ttgtttgcgc gtgcgttacg gtgaactaga ggtcttagta gcaggtttgc 300
aatatggctg gctcattggt tcttc 325

<210> 1828
<211> 385
<212> DNA

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<213>      Triticum aestivum

<223>      Clone ID: LIB103-045-Q1-E1-H11

<400>      1828

gtcgacgggc ccaatgaagg caagagcctc gtgcggtcct tctgctcgc gatgaaggag   60
gacagcctcg aggacattct ggacccgagc atcgtgcgcg cagggacgga gacgctgctg  120
ggagaagtgg ccgagctcgg gaggatgtgc ttgggtccca tgggtgaaga gaggccttcc  180
atgaccagcgg tggccgatag gctgaaggct ctgcgaagca cctggaggga agagctggtg  240
ttggaccgtg ccgtgacgga aaatatggtc gtgcacatgc cacctgcagc agctccagtg  300
cccggggatc tcgcgtcatc gtcateggga gcccctcga cggtgccgga catgtccgga  360
atgagcatgg aggcacccag atgat                                           385

<210>      1829
<211>      403
<212>      DNA
<213>      Triticum aestivum

<223>      Clone ID: LIB103-045-Q1-E1-H3

<400>      1829

ccgggtcgac taggctgtgt acgatcatca cttgagacgg actagtcac atcgggtgaac   60
atctccatgt tgatcgtatc ttccatacga ctcatgttcg acctttcggt ctcttgtgtt  120
ccgaggccat gtctgtacat tctaggctcg tcaagttaac cctaagtgtt tatgcatgtg  180
taaaactgtt ttacaccggt tgtatgtgaa cgtaaggatc tatcacatcc gatcatcacg  240
tgggtgcttcg aaacgacgaa ctttagcaac gatgcacagt tagggggaac actttcttga  300
aattattata agggatcatc ttatttacta ccgccgttct aagtaaaca gatgcataaa  360
acataataaa catcacatgc aattatataa agtagtgaca tga                                           403

<210>      1830
<211>      361
<212>      DNA
<213>      Triticum aestivum

<223>      Clone ID: LIB103-045-Q1-E1-H7

<400>      1830

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gggccgacgg ggaacttggg cgccgtccac aaggggtcca ggggctcaga tattggccgt 60
 ggcgagcggg aagcgttgac agttggtcta cgcagaaaca tagagttgtg ctgcctagcc 120
 ttgattcata tcctactacc agagaccttt gtcaatttat taaccgccc tcttgagttt 180
 gcaccttacc tcagtggctg tctggcgta cagtcttgga ctgccgtgat gagtttaatt 240
 atattgaatg gttcatacgt tgggtcttat cacaacggct tctggagctg ctgagattcg 300
 ctcatcagcg agatgcctga gatacgactg atccagacgg tctaggcgct ccatctttac 360
 c 361

<210> 1831
 <211> 395
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-A9
 <400> 1831

tcccgggtcg acggtgatcg ctagatccaa cgctccaacg actacgaggg gctgggcaga 60
 tgcaacagga cgaggggctg gtactagcat aggaaccata agtagggctg ggaggtgaac 120
 acgaggaggt gccgcaacaa gggcaactgc atcaactact ataggagcac atgcaaatgc 180
 tacaagatga ccaagtccaa ctattgctag acgatcacta gcagcatctc cttgcatcca 240
 tcagctccct cctgtcgatc acctgttag tgttactcga tcaagatcct caagatgacc 300
 acctcatgtc ccataccag accacgttgt gttctcacat catgcaccat tacattatga 360
 ttggcaacac tttccctcac tataactcaa gtcga 395

<210> 1832
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-046-Q1-E1-B10
 <400> 1832

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 cggcgagggg aagacgaggg gcaggaagaa gggcagcaag gccaagaagg gcgtggagac 120
 gtacaagatc tacatcttca aggtgctcaa gcaggtgcac ccggacatcg gcatctcctc 180

caaggccatg tccatcatga actccttcat caacgacatc ttcgagaagc tcgccgggga 240
gtccgccaaag ctgcgccgct acaacaagaa gccaccatc acgtcccggg agatccagac 300
ctccgtccgc ctgcctctcc ccggcgagct cgccaagcac gccgtctctg agggcaccaa 360
ggccgtcacc aagttcacct catcctaggc tantctgccg tgt 403

<210> 1833
<211> 418
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-B4

<400> 1833

cgggtcaagaa atccccgggtc gacgggggggt ctttaaggatg acgaaagcgt cagtgcgcac 60
atcaggcgag agagatatcg agactgcaaa tcgctttcct gtttttgcac ttcttactgt 120
ttatgtaact ttgtcagtat tcagatcata tagcctatgg ggagcagtgt aaaacataat 180
ttgttgatgc ttaaaatttg gagtgatatg tttgatacat ctgcactgtt gacatggtct 240
tctttaatga ataacaaggt ggtccagtag aattgtaact ttagagccct gcaaattgtc 300
tgtgcaaatt atgatgctgg tttatagaac taaatttgtg gcgtgcctct attttatctt 360
tagttgtagg tttctccgaa gctttattgt gggttgtgtt acttgccaaa caagttct 418

<210> 1834
<211> 389
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-046-Q1-E1-B5

<400> 1834

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aacttaccac cgttccgttt actatgacac gctccatcat tgtcatattg ctttgcacga 120
tcatgtagtt gacaccgtat ttgtggcaaa gccaccgttc ataattcttt catacatgtc 180
actottgatt cattgcatat ccgggtacac cgtcggaggc atccacatag agtcatattt 240
tggttctaagt attgagttgt aattottgag ttgtaagtaa ataaaagtgt gatgatcatc 300

attattagag cattgtccca agtgaggaaa tgagatggag actatgattc cccacaagt 360
 cgggatgaga ctccagaaaa aangnnnaa 389

<210> 1835
 <211> 405
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-B6
 <400> 1835

ggtaccgagt ctggaattcc cgggtcgacg gggaagaagc ccaaggccga gaagcggccg 60
 cccaagtcca aggagggcgg cgccgacaag aagaagaaga aggccaagaa gagcgtggag 120
 acgtacaaga tctacatctt caaggtgctg aagcgggtgc acccggacat cggcatctcc 180
 tccaaggcca tgtccatcat gaactccttc atcaacgaca tcttcgagaa gctggccggc 240
 gagtcggcca agctagcccg ctacaacaag aagcccacca tcacgtcccg ggagatccag 300
 acctcgtcc gcctcgtoct ccccggggag ctgcceaagc acgccgtctc cgagggcacc 360
 aaggcgtca ccaagttcac ctctcttag atacgccgtt cctgt 405

<210> 1836
 <211> 412
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-B7
 <400> 1836

attcccgggt cgacgggact gtggaaacca gatcgaagca gagtggataa gagaacggaa 60
 ctggcatcgt agaagaaaag ctggattgat taccacgagt tgcaatcatt gtggtaaaaa 120
 agaacctggc tcgatacaat gttaggaaaa tatacctctt cgtattatca tataagtagg 180
 ctgaagccat catatataaa tataccgaag gaaggccgaa gatcataatg caaaaggcca 240
 aaggacacta taaatataac tctaacagat accacttctc ttaaaatgta cattgaaaat 300
 accaaagccg ccggcccag ggggtttaca tactaaccac gctaattggaa attactgagg 360
 tactcaacac acagaatagc ctagaaaaca aaatttagaa atcacagaca ca 412

<210> 1837

<211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-C10

 <400> 1837

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 atagctcaac ataaaagtaa atagataggc ccttcacaga gggaagcagg gatttgtaga 120
 ggtgccagag ctcgatttta aaatagagat gaataacatt ttgagcggca tactttcact 180
 gtcaacgcaa caactatgag atggcgatat cttccatgct acatacatta taggcgggttc 240
 ccaaacagaa tggtaaaagt ttatactccc ccaccaccaa caagcataaa tccatggcctt 300
 gctcgaaaca acgagtgcct ccaactaaca acagccccgg gggagttttg tttaattatt 360
 ttgatttgct ttgatctttt ttatcatggg actgggcata ctagt 405

<210> 1838
 <211> 437
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-C11

 <400> 1838

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 agggtagttt tgcagtagag ctactgtttt gttgttctga atgtttccta gctctgctgc 120
 tcttctccct ggttggagct gaaaatgttc tgttaatttc tgagggactt gctgaacctt 180
 tagtttaaata tctcccttat aataatttct gctgcagcta ctgttctggc tggaccgaga 240
 gctgtaaaca gtatagtctg gtttggcctt ggcttttttaa taaaagttgg gtctgggggg 300
 caaccctct catttaattc agttctgtat ttctcctatg gctgttggcc gctttcattt 360
 gtttatataa tttcccagtg gcttttagtc cacgagtgc tctgaatat gttatttctt 420
 cggaatggtt aacgcc 437

<210> 1839
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-C12

<400> 1839

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cctactccgt tttgtccgac aaggggaaga gggccatgta cgacgccggg ctctttgatc 120
ccctcgacga cgacgaccag gatttctcgg acttcatgca ggagatgctg gtgatgatgg 180
atagcgtgaa aaacgagaag ccggacacgc tcgaagacct gcagaagatg ctggatgaca 240
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gtggtgggtg cggtgggtcg gttccaccgg aggccaaccg cagaactcgt gtcgcccctt 360
acccgcagcc ttcgcgaagg tgatggacgc gccggtgctc gtgacgtgca cgc 413

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<210> 1840

<211> 365

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-046-Q1-E1-C2

<400> 1840

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ggcacgtgta tcgagacgcg ccggcagtgg gtaagagccg tcgccgagga tgaccgcgtg 180
aacgttgcac cttctcacct tccccggcgg agaggatctg gctggatctg tgaccagcgg 240
tgagtagaga gagagagtgt ggccaccgct gtcgtgttta gatctggaga ggacgagata 300
gtgtgaagag agcancacta gcaagcaagc gcagaggctc ctgcctatat agtggagtac 360
tagtt 365

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<210> 1841

<211> 437

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-C5

<400> 1841

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catcattaat ccttaccata ggtttcttaa tgggtggaatc cgcaagggtgc aaattttaag 120
agcaatcatc aaattcacgg aaacctaaca catcacgcaa agtttttggga atcgtggaaa 180
cactagcacc caaatcacat aaatcatagc attaatacata ttttaatttta attttaattt 240
taatagtagg ttcccactca tcataaagtt ttctagggat agaaacttct aattcaagct 300
tttcttcata agattgtatt aaagcatcaa taatatgttt ggtaaaagct ttattttgac 360
tataagcatg aggagaattt agcacggatt gcaacaagga aatacaatct atcaaagagc 420
aattatcata attaaat 437

<210> 1842
<211> 408
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-046-Q1-E1-C6
<400> 1842

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cctcctcccc ctttccccgg ccgagtgcgg gccgatgtag ctccggcggtt gttcgaggcg 120
ggacgtatgc tgcggtttgg cggtcgggtg cgtcctttgg ggcaaagccg gtgactttgg 180
ctggtcttgg ggggtgtctg atgcagggcg gcggccttgg cgggtgggaga cgcgacgttt 240
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tgcgggtggt tggcggaggt aggggtgcgtt ggaggggtgt gagcgccggg tacaccactt 360
gtcatgggc cgacggtggc gacgtccgtg gacgccgtat ccttcac 408

<210> 1843
<211> 403
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-046-Q1-E1-C7
<400> 1843

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atccagaaga acgcgaccat caaggacggc accgtcgtgt agagcgccgc cgggcccggc 120
cgacgggggtt ccgcgacaac ctctgcgctg cgctgatcgt tgcgctcggc ttctcggggc 180

cgggactgga ggagtgaccc ggggacgggg gccgtttgaa gctttgaaatg gctgagactg 240
 aaagtggagg cgcgcgcagg cagcatcagt agtaagtagt aagtagtaag tagcagtgga 300
 acaaagtaat agtcgttcgt tttgcccctg taataaataa gaagaggctg tgtgttgagg 360
 tgaaaaaaaa aaaaaaagta aaaaaaaaaa aagcggccgc tct 403

<210> 1844
 <211> 412
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-C8
 <400> 1844

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 gcagcaatcc ttgagtacct tactgccgag gtccttgagc tggccggcaa cgctagcaag 180
 gatctcaagg tgaagcgtat caccctctgc cacctgcagc ttgcgggtccg tggagatgag 240
 gagctggaca cctcatcaa gggcaccatc gctgggtggtg gtgtcatccc tcacatccac 300
 aagtcactca tcaacaagac ctccaaggag tgaatgaaat gcaataacgg gtagttgttg 360
 tgtgttgtat ctctgtgatc ccttggttatg ttgtgccatc tgttacgtgt tg 412

<210> 1845
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-D10
 <400> 1845

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 ctgtctaaag tgatgataaa tcataaccag aggggtgtta tgaggatttg atgtctatgc 120
 ttagtggtga tatggttgac ccagttatct ctgttgatat atgatgcata tgtttgtggt 180
 gcattttcat ggcataataa gccacagggt attttcacct taagtagaat ctgataataa 240
 ctcaacttga acatatcgtt gatcgggtca tgggtccact gaatcgagtt ttcccagtcg 300
 aaccacattt gcctttatgg gaaggccttt attcagtcgg ttgtcatgcc tctggtcggt 360

gcctccaacg attgaaggtt atgggcatgt ggtaccctgg cccggtaagc agacataacc 420
 ttgtgt 426

<210> 1846
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-D12

<400> 1846

ggtccagaat acccgggtcg acgggatatg tttgattcct tgcaatagtt ttgcgatata 60
 aagatgggtga tattagtgtc atgctagtgg gtagttgtgg attatagaaa tacttgtgtt 120
 gaagttttgtg attcccgtag catgcacgta tggngaactg ttatgtgatg aagtcggagc 180
 atgatttatt tatttattgt cttccttatg agtggcggtc ggggacgagc gatgggtcttt 240
 tcctaccaat ctatccccct aggagaatgt gtgtagtact ttgtttcgat gactaataga 300
 tttttgcaat aagtatgtga gttatttatg actaatgttg agtccatgga ttatacgcac 360
 tctcaccctt ccatcattgc tagcctcttt ggtaccgtgc attgcccttt etc 413

<210> 1847
 <211> 115
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-D3

<400> 1847

ggtcaagaaa tcccgggccc acgggcagcc caacctctc cagttcggct ccagcacctc 60
 cgagatcctt gagactgaat ccagaaagga actgtccggc caattaccaa ggaac 115

<210> 1848
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-D4

<400> 1848

ggtccagaaa tcccgggtcg acgggcagga ttacaaaatg ggccattgag ctcttaccat 60

tcgatataac ttacaaacct cggcgagcta taaagtcaca agttttggct gactttgtcg 120
ctgaatggac cgaagctgaa ctccctaaag agtacggcgc atactccaat tggattatgc 180
agttcgacgg ctctaacatg ttggccggac tgggggctgg tgctgtattg acgtccccga 240
ccggggacac agtccagtac gtacttcaaa taatatacac ggactccaac aacgcagccg 300
aatacgaggc ccttttacat ggtctccgga tggcaatctc catgggcatt caacgcctag 360
aggtgcgcgg ggattcaaac cttgcaatat cccaaataaa tggagacttt gacgc 415

<210> 1849
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-D6

<400> 1849

ggtacctagt ctgaattcgc gggtcgacgg ggacgatggg gatggtggtg gaggagaaga 60
tcttgatgac gacgatgatg aggaagacac cgatgacgat gatgaggatt cggaggatga 120
tgatgtgcga gaagagacgg aagaggaatt ccttgcaaga tatgctgctg ctgctggcga 180
gtcaatcgag gttgttgagg aaggagacat agatgaagaa acccaagaca ttgaactggg 240
ttccctggac gaaatggaca tacaacaagt ggttctttca ctgattcaga aacatactgc 300
tctcctccaa gcgcagggtt tgccagatga cctaattgag agaattgcag aaacatttcc 360
tgaatatgag cagctgttgc atgctcacca a 391

<210> 1850
<211> 431
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-D7

<400> 1850

ggtaccagtc tagaattccc gggtcgacgg ggcacgactg acccttattg tggtgctaag 60
tatgggcaga aatgggtgcg tacaaggact atcattgata gtttcactcc caagtggaat 120
gaacagtaca cttgggaagt gcatgatcca tgcactgtga tcactattgg tgtatttgac 180
aactgccact tgaatggcgg ggaaaaggct aatggtgcac gggataccag aattgggaag 240

gtccgcatcc gcctctcaac gctagagact gatcgggtgt ataccactc ataccctctt 300
attgttttga cacctgctgg cgtaagaaa atgggtgagg tacagcttgc tgtccggttc 360
acatgctcat cactgctcaa catgatgact ctgtattcac agcccttgct gcccaagatg 420
cactatatac a 431

<210> 1851
<211> 419
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-046-Q1-E1-D8
<400> 1851

gggtaccagtc aagaattccc gggtcgacgg ggtgacgatg cgcgtcggga atggttccaa 60
ggtcgatgtg atcgccgttg acacgctacc tctagattta cctatgggat tagttttaaa 120
cctcaataat tgttatntag tgctagcttt gagcatgaac attgtatctg gatctcgttt 180
aatacaagat ggctactcat ttaaatacaga gaataatggt tgttctatct atatgagaga 240
tatgttttat ggtcatgccc cgctgggtcaa tgtttattct taatgaatct cgaacgtgat 300
gttacacata ttcatagtgt gaataccaaa agatgtaata ttgataatga tagctccaca 360
tatctgtggc actgccgcct tggtcacatt ggcgtcaaac gcatgaagaa gctccatac 419

<210> 1852
<211> 346
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-046-Q1-E1-D9
<400> 1852

cggttcgacc ggaggccatc cagcagctcg aggggatggg gttcaaccgt gagcttgtgt 60
tggaggtctt ctttgcattg aacagggatg aagaactggc tgccaattat cttttggatc 120
atggccatga gtttgaggaa caacaataga tgtagattg gtcttgctgt tgaaagacag 180
aagagtcagt gacagaagca tttcagtttg gtgtcgttcc tatatcttgc tgctgaatat 240
cactgctact tgccattagt gccttggttc tgactttcaa tttcttgat cctggaaatg 300
ctttctaagt acataatctc atatgcaaac cttaaattgt gtgtgc 346

<210> 1853
 <211> 382
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E1

<400> 1853

cgggctcgacc ggccgtacaa tgtggtacga caagtacgct aggggcttct gtacccttta 60
 atatggtgtg agaagtcctg acactttcac aagtgcggca ccccgaaact atagcactat 120
 atgcatcagc tccgaatcat gatttgggcc aatagttggg tttgcctggc tcctatgttt 180
 tgggtgcctta tgttccgcta tatcggttaa ggtagcacta ggagaaccac tgcgattgtg 240
 ccccggttga gctgggttaa gcacctcagt ggagaaaagct aaaactgact gtcatgatga 300
 ggcgagagac cggtcgctgt tcgagagggt tttcaagtcc ctaaagactt atgccgcttc 360
 gagcgaggag ctggataacc ct 382

<210> 1854
 <211> 399
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E10

<400> 1854

gggtcgacgg gggggtcaag caactgacag ccatagcctt gcagaaaggg cacggcgtga 60
 gaaaataacc gagcggatga aaattctcca agatcttgtc cctggatgta ataaggttat 120
 tgggaaagca tcagtccttg atgagataat caattatgtc caagctttgg aacgccaaat 180
 tgagttcctg tccatgaagc tcgaggcggg taacgcccat gccatgctc acaacggagt 240
 tgaaacattt ccaactaaag acttcgctgc gccggcatac aacacagctc cagggttaac 300
 atttgaccgg caaacaccaa gggagtacgc ccagggctcg ccggtgcag aatggcttca 360
 catgcagatt ggtggcacct acgaaagagt gacgtgagc 399

<210> 1855
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E11

<400> 1855

cgggtccagaa ttccccgggtc gacgggattg tatattgtcg tatttatggt gtgtcagttt 60
tgtgatatac tttaacaatta aaacaatttc tgaagaaatc tcaactaaatt tcttaacttt 120
ttttgaaatg aaaagataga tcatttttcta tggtatgcat tcaaaacagg caaaagcgcc 180
tggatgaccg gagtcattta catgaagggtg atgtaagcgc cgcacagctg gccatcacca 240
ggccatcaga aagacgtttc agaattacat gggaaggaga tggggggggt gtatggaggt 300
gtgtaaacta tgcagaacca ataagattag cccaattcac tagtacttcc ctggttggtt 360
ctccccgagc ccgcacagtg cagagcttga tgagatcggc aatctccttg tagacacg 418

<210> 1856

<211> 412

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-046-Q1-E1-E12

<400> 1856

gggtccagaat acnccgggtcg acgggacagg gcacgaatac ctgcagcacg agaatttcat 60
ggaatgagca gtcagttagt caaggcaatg ccgagtctta tttttacaaa agtccaggaa 120
gacaattgta cttegtcaac atgtgccatt tgcttggaag actacagtgt tggtgaaaag 180
ataaggggtgc tgccttgctg tcacaagttc catgctgctt gcgtggacct gtgggtcaca 240
tcatggagga cattctgccc tgtatgcaag cgagatgcaa atgctggaat gtcaaatttc 300
cctccatcag agtctacccc tttgctttct tctgctattc ccttgccagc tgaatcgaca 360
gctttgtctt cttttcgttc aatggtagca gcatctcttc caaggacaat aa 412

<210> 1857

<211> 303

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E2

<400> 1857

gggtcgacgc gggtttttatg aagggaacta tttgggggtcg cgcggaagca aaattagcta 60
 ggggtttatta gtgctgctct agttccgctt gctattcctt tcgcttggtc gtttgtttct 120
 ttaaggattt tattatcaag gttgtaaggc tggggatgtg cagctagctt cagtttcaag 180
 cctgccgtct cgctgctgg tacattgtaa aacagaaccg ctgctctcca gtgactgaat 240
 gattataagc agctactgta gtagtatttg gggaaaaaat atgtaccaa ctgttctgat 300
 ctg 303

<210> 1858
 <211> 237
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-E4
 <400> 1858

gggccagaca tccccgggtcg accgggtcatc aacacgcacg gtgtcatagc tgctgggtcc 60
 gtgcgcccaa aagcggggagc tgctgcagcc ctataaccga ctttaagctgt gtgcggtggt 120
 gtcataagga gcctgtccat caccactata gttatcccaa gtttcaactc atatcgaca 180
 tgttgattta cctttcattt ttcttgacgt cgtcaacgtc cgctgtcta taacgtg 237

<210> 1859
 <211> 392
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-E5
 <400> 1859

taccagtcta gaattcccgg gccgacgggg acgataacaa ctatgtgcc cctgaatacg 60
 gtgatgctgc aacgggggaa gctgctgaag atcaagagga accagacgat gtgccaatg 120
 atgctgcaac gggggaagct gctgaagatc atgaggaacc agacgatgtg cccgatgatg 180
 atgatctccg ccgggtcatt gtcgatgcaa ggacgcaatg cgaaagtcaa aaggagaagc 240
 tgaagtttga tcgcatgtta gaggatcaca aaaaaagggc tgtaccgcaa ttgcgaagat 300
 gacaatacaa agctcggtag cgtactggaa ttgctgcagt ggaaggcaga gaatgctgtg 360
 cctgacaaaag gatttgagaa gctactgaaa at 392

<210> 1860
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E6

<400> 1860

gtaccagtct agaattcccg ggccgacggg aatggattga gtttcccctt tgaagttatc 60
 ttatcggatt gagtctttaa agatttgaga acacttgatg tatgtcttgc cgtggatatac 120
 tatggtgaca atgggatatac acgtgattca cttaatgtat gttttgggtga tcaacttgtg 180
 gggtccgccc atgaacctat gcatatgggt tggcacacgt tttcgtcgtg attctccggg 240
 agaaactttg gggcactctt tgaggtccta tgtgttggtt gaatagatga atctgagatt 300
 gtgtgatgca tatcgtataa tcatgcccac ggatacttga ggtgacattg gagtatctac 360
 gttacattaa ggttttggtt gatttgtgtc ataaagtgtt attctactac aaactctaag 420
 gctgttt 427

<210> 1861
 <211> 401
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E7

<400> 1861

gtaccagtct agaattcccg ggctcgacggg aaaggcactg aactagtttg caacaaagaa 60
 gagagaaaat gtctaccgct gaggcaaccc gtgaggagaa tgtgtacatg gccaaagctcg 120
 ccgagcaggc tgagcgttat gaggaatgg tcgaattcat ggagaagggtg gccaaagacct 180
 ctgatgtagg tgagctcact gttgaggagc gcaacctgct ctctgtggct tacaagaatg 240
 tgattgggtgc ccggagggtt tcttgaggga tcatctcttc cattgagcag aaggaggaga 300
 gccgtgggaa cgaggcctat gtgcgcatcaa tcaaggagta ccgtaccagg attgaaaccg 360
 agctcagcaa gatctgtgat ggcatectca agcttctgga c 401

<210> 1862
 <211> 399
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E8

<400> 1862

aattcccggg ccgacgggag catgcgacgc gaccggcgct ggtttgggcg gctggagcaa 60
gaagaccaga ggttgaagaa gcactatgac cgttggatgg acatcgtagc gtcactggag 120
ctagaatcgt tcatattgac taagttgaca aagccctcag tccccatcaa cttagtaggc 180
ccacaagtca gcctcccacc aaggtgggtc ccagctaaca ggggggtatt catttttttg 240
tgcgtaataa ggaggcactt ccggtgggtc cgagctgaca gcaggggaac gttttttgcg 300
cgaaatacga tggcccgtcc gttgggtccc tgatacgtct ccaacgtatc tataatttat 360
gaagcattca tgctatttga ttatctgttt tggatgttt 399

<210> 1863

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E9

<400> 1863

cgggtccagaa atccgggtcg acgggtaaaa acaaagatgg tagtgaagtg tttgattggt 60
ttgagaaata tgttctgcgt tcgaaattgg atgttagcat tgatcaccta gagctgtgct 120
cactgttata acatggtggt gatgcaagag ataaacatat caccttattg atgaatgctg 180
gtctcctgac acgccaacta atagatccaa acatgtactg gttttctatt ccaagtattg 240
gtcctatccc aggttcacac aaaagattgg tgaccatggc atcagtatac aaattaactc 300
tacaagcctt ttccatgtcc acatcatttc cctcgatgca gtccaaaaga acaatttgta 360
atgattctat agttagcaat taccaatgta aaggaaatct attatttgca gcagctccta 420
ctgagct 427

<210> 1864

<211> 438

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-F10

<400> 1864

ggtcagaat acccgggtcg acggggcaaa tgacaggaag tcaactacaac gagctctgga 60
taataagata tatcttctcc tgtatggcaa aacttttggg gctcctgatg gcaaacctgt 120
ttggcatttc ccagaaaaag tgtacgaaaa tgaagactct ttgcgtttgt gtgccgagtc 180
agccctaaaa tctgttctcg gcggacttga caatacatat tttgttggca acgctccaat 240
ggctcacatg gtaactgaac aaaaagagga ttccagtgtt tcaccattca agcggttctt 300
cttcaagtcg caagtgatcg gcaccacgca tttggacatc aggaggtgcg aagaccacgc 360
gtgggtgacc aaagctgagt tgctggaata tttccggag cacaaggatt tctttaataa 420
gatgattatt cacgttag 438

<210> 1865

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-F11

<400> 1865

cggtcctaaa taccgggtc gaccacagct gggacctcaa cttcagtcga atccgtgaca 60
ctttttgggt gcggggcttc ttcagtgaag ggttcctatt gaactgatgg tgtgtggata 120
tgctccaaaa acgcattact gggaatggct tctctcttgg aacctatttt tgccaaatca 180
tcatecgctt gatctttcag tcgggggtata tgatggagct ctaacccctc gaatttcttc 240
tctagctttc tcaactgcatt gcagtaacca gtcattggctg gaattctgac gtcccactcc 300
ttcatcacct gattaaccac caaatctgag tcgccataaa ccacggggcg acggacgccg 360
agtgaatgg ccatacgcaa ccatacaaaa agtgcttcat attc 404

<210> 1866

<211> 389

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-046-Q1-E1-F2

<400> 1866

gggtcgacgg gcattaagca gttctccgaa atttcatcaa taaaccagcg aattttatta 60

tctgggccat cgggtttctga gatttatcag gaaacattga taaaggcact tgccaaacat 120
 tttgggtgcta gactacttgt tggtgattca ctctgtttgc ctgnggtgcc ttcaaaggac 180
 ccagaaaacc agaaagatgt tggcaaggct gataagtcag gggacaaggc angtgggtgag 240
 aaattgacaa ttcttcataa gcatcgctct tccttggcag acacaatgca cttcagaaga 300
 ccagctgcac caacttcacag tgtgaatgct gatattgtgg gtacatccac tctacattct 360
 gcaactttgc ccaaacanga gtcctcaac 389

<210> 1867
 <211> 298
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-F3

<400> 1867

ggctctagaaa tcccggggccg cccgaggatt gaagcttacg tgcaccatct tgctaaattc 60
 tatctcttcc acagtgtctt ataaatccat gtcataggac gtcgatttcc tgtctctaga 120
 atgatgagta ctgactttca tacaagtgtg gcctcgctgt cgtaaattcg tctctcgaca 180
 tctgtgggtca tctctataa gcaaccaaag attcgtcttg tggtgctttg cactgcccct 240
 atggagaatt tgacacccac tgctgtggca catcaaccac ttcagttatt gcgattac 298

<210> 1868
 <211> 408
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-F6

<400> 1868

aattccccggg tcgacgggca cgggggctagg gtttgggggg ggttccggct gggcctcccc 60
 agcttataaaa gccggacgag ccttagtgct cgggtcggac acggcccgtg ggtcggttgc 120
 gcattttttt aaaataatta cgctcagaaa aaaaacaaaa agactactaa acggactcca 180
 aaaatcctga aataaatctt ccccggttc taaaatcaag ccgcacatga tgaacattta 240
 tttggggcct aaatgaaatt ttgaaaaatg cacattttcc taaattcaaa taaaatagca 300
 aataaaacca aataaaaatc ttgtttgact tttttattaa atcctcaatg tttctttatt 360

tttgggaaag tcattttatt ccctctctca tttttttata ttagaaat

408

<210> 1869
<211> 402
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-F7

<400> 1869

ggtagcgggc aggaattccc gggtagcagg gggggaccat gtggtaggga atgtggacgg 60
ttttgcgaac accaaggatg atggcggtgc tgagaagcca tctgaggctg tgtcgggtggc 120
tgtaggtgat atggcgaggg atggtaggca ggatgagcca ctcattcagg ctgcagagtg 180
ccgcattatgc caggaagagg acagtatcaa gaatctcagc aagccgtgta cgtgcaacgg 240
cagtaggaag tatgctcata gaggctgtgt gcaacgctgg tgcaatgaga aaggagacat 300
tacatgtgaa atttgccatg agcaatataa gcctgggtac acagcaccac cagtagttca 360
accagatgag accagcatag atataagtgg ggattggacc at 402

<210> 1870
<211> 443
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-F8

<400> 1870

aggtagcagt ctagaattcc cggtagcagg ggtgaagcag gttcatcaat ctcagcgcc 60
ccgactacct gtcattccc caagatgacc tccttcattat cttctcattat cttccaagag 120
atctgaactt tatcgaccac acaagcaata ttggttgga ggagcatcaa agggctagac 180
caatcatcgt ggatccagca ttgcagatct caaacaacac tgagggtctg acaacaaggg 240
agaaaagaag catgccttca gctttcaaaa tatttgtagg ttcgtcgtgg gtaattattga 300
gccgattcatt cctggagttc tgcatattgg gatgggacaa ccttcctcgc acgctgctca 360
tgtacttcac caatttcctg tcgtcctcgg agggatactt ccacacggtg atctgcaact 420
cacaagttca acaagaacac aac 443

<210> 1871
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-F9

<400> 1871

cgggtccagaa taccggggtc gacgggaggg gttaatcata agtgggatgc ttgtccaagt 60
 aagggtagta cccaagcacc ggtccacca catatcaa at tatcaaagta ccgaacgcga 120
 atcatatgac tgtgatgaaa actagcttga cgataattcc catgtgtcct cgggagcgct 180
 ttcctttata taagagtttg tccaggcctg tcctttgcta caaaaaggat tgggccatct 240
 tgttgacac ttttacttg cattacctgt tactcggtac aaattaactt atcacaaaac 300
 tatctgttac cgataatttc agtgcttgta ggaaatacct tgctgaaaac agcttatcat 360
 ttccttctgc tcctcgttgg gttcgacact cttacttata gaaaaggcta cgatagatcc 420
 cctacac 427

<210> 1872
 <211> 416
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-G3

<400> 1872

cgggtccagaa ttccggggtc gacggggacc aaaaaaac ttaggatttc ttattgtact 60
 gattgaactc gacaaattct tgccccgc at aagcaaagga aaagaactag gcctgtcgat 120
 actggatttt accatagttc tagttctaaa aaagactgtc aatttcttct taaaaatagg 180
 gctctggcag ggttctgggt agtggcccaa accgatacca atagggatga gggatatata 240
 cttatgaatt tcataattga ttctattccg caattcataa ctacgaaagt aagagggtcg 300
 aaatcttttt atccaaaggt ccctaaagga cattcctttt ttgtccctaa gattgaagaa 360
 gagattatac gaaagactat caagacttcc taattatctg aactaccta cactaa 416

<210> 1873
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-G5

<400> 1873

aggtaccagt ctggaattcc cgggtcgacg tcctgagagg ctggcggcgg caccttggcg 60
gggtccttct catgatctcc ggcctgcttc cgggacatgt ccgtgaactg cgtcacgtag 120
agcttatggc ccatgacggg gcctgtctcc gtgacgcgct ggcgcccatg caacatcatc 180
atcgacagca ggcattgcgc gagagccctc aaccccatc cagagctgat caactcgatg 240
agcttatcca gctgggacct gaggatgtca atcatggagt tggaccgctc aagttgaagg 300
ttgttcctgg cttccaccag cttgttattg gctccttgga ggcccacact gtctgccagt 360
gtaatgcct gccgtaagtc ctctatgtag atttgacgga cttgctcggg gagcacgggc 420
tccgaaa 427

<210> 1874

<211> 388

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-G6

<400> 1874

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ggagcttttc tccctccgtg caccacaaga gcctttgtgc aaaatttgaa ccagacattg 120
cttttgtaca attgtgtgtg cttagtatta cgattctagc aataccgctc gctttataga 180
tcccctactt ctacatgtac tcaattgtac atatcacgcc cccatttgta ctogtactat 240
cttaaagaat aatcgtcaga gctaaattgg accgctcaaa ttgaaagttg ttcttggtt 300
ccaccaactt gttaatggct ccttggaagc ccacactgtc tgccaatata aaccggccgc 360
tctaaaggat ccaagtttac tttaccgt 388

<210> 1875

<211> 396

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-G7

<400> 1875

gtaccagtcc agaattcccc ggctcgacacc ggcattctatg cggcgcatcc ttcctttgat 60
gacagtggca tcccgccacc tccatcaaag tggaagggtt catgccatgg tactgctgct 120
gccattgca ataacaaatt gagtgggtgcg aagtccatca ccgtaaatga ctctggagat 180
gtcatagggc atgggacaca tacctcgtcc acggctgctg ggaactttgt cagtgggtacc 240
tcggcccagg gtctcggcag ggccacagca gccgggactg ctccacatgc acatctggcc 300
atgtacagca tgtgtacgct tcgtgggtgt gactccgctg acatcgttgc ggggatagac 360
gaagctatca aggatggggt tgatgtgctc tctcgg 396

<210> 1876
<211> 422
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-046-Q1-E1-G8
<400> 1876

aattccccgg tcgacatatc atagacatgt ctctccaat ggacgggtga catctggcac 60
accgaggagc agacacgtgt ttcctccgc caatgagaat attacacatg gaaaatcacc 120
attggctctgg gctgttaacg gggtatcaga tccaaaaccg gacacgatag cttaatggca 180
ttccattacg gtggatgcca catgtcggtc acccttgatg aaagcacttc catgacgcgc 240
gatttatcat catggaactg gacacttccg tgatgataat tttggtaatg tcatggaaca 300
cttctacggc agcacaggta tgactatctt gattctgtca taaaatcgtc atggatgtac 360
atgcatgaca gaaaacgtga cctactgtga caaacagta acatcacgga agtgtccttt 420
tt 422

<210> 1877
<211> 97
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-046-Q1-E1-H1
<400> 1877

gggtcgacgg gatgactaat gttgagtcca tggattatac gcactctcaa ccttccatca 60
ttgctagcct cttegggtacc gtgcattgcc ctttctc 97

<210> 1878
 <211> 362
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-H10

 <400> 1878

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ccggccggga tcagcgggcg gccgcacgac aacaacatca tgctctggaa cgccgtcatc 120
ttcgggccgg atgatacgcc atgggacgga ggcacgttca agcttacctt gcagtttaca 180
gaagattacc ccaacaagcc gccaaactgtt cgttttgtct ctaggatgtt tcacccaaat 240
atztatgcag atgggagcat ctgcttggat attctacaga accagtggag ccctatatat 300
gacgttgctg ccatattgac ttccattcaa tccttgctgt gtgattcaaa cccaactct 360
cc 362
  
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<210> 1879
 <211> 408
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-H11

 <400> 1879

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cggctcctaaa taccggggtc gacggggacc tggagacatt ttgactgctt ctaacgggat 60
gacaattgag gtaaataaca ctgacgctga agggaggctt acaattgctg atgctttggt 120
ctatgcttgt aatcaagggtg ttgacaagat tattgatctg gcaacactaa ctggtgcctg 180
cgttgttgca cttgggccta gcattgctgg aatcttcaca ccaagtgatg aactagccca 240
ggaagtcgcc gctgcatctg agttatcggg ggagaagttc tggagattgc ccatggagga 300
aagctactgg gagcagatga agtctggtgt ggccgacatg gtcaacaccg gtggctcgaca 360
gggaggctcc atcaccgctg ccctgttcct taaacagttt gtcgacga 408
  
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<210> 1880
 <211> 380
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-H2

<400> 1880

gggtcgaccg ggatgaatga atccattgtg agaagagccc ttgtgaccat gcaccagagg 60
gacgaagtgg agtacaagag ggagcgccat gtgattgtcc gcaaggcttg agctgaactg 120
aaccgatgga gctaccatgg aaccctctgg ccattctgatg tgtgtgtata agtagtgctg 180
aactgcagc ccgtttcctg aggaaatttg ttgggtcggt gaaattgagt tgtagttgta 240
ctactttgag ctgtagctgt agccctaaat catattgtgt cgaactgaag atgtacccca 300
gtaagtcat tcatgaatgc gacattttgg cgttctgcag ctgagcagag tcaatgccta 360
agaaactgaa acttgctcgt 380

<210> 1881

<211> 395

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-046-Q1-E1-H3

<400> 1881

ccgggtcgac gggcaagggt aggaagaggg gctcgtccgc ggccgaggac gagcagtcca 60
cggcggcggt ggcggtgcag ctcgccaagg agtggagcac gtggacgatg aagacggcga 120
aggtggtggc gcaactggggc ttcattccgc tcattatcgt cgtcggcatg actaaggagag 180
acgagcccaa acctagcttg ttccagcttc tgtccccgt ctgatcccat ccccggcgag 240
ccctagactg gatcgatcca gctcctttta gttactacta gtagatgttt ttgctgttta 300
ttgaatcctg gtggttgagt tcttgatccc tgngtggtga tcttctatct gatctgtgtc 360
gaataatggt atgtcggtgg atcgatcctg gattg 395

<210> 1882

<211> 88

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-H5

<400> 1882

tcgacggcgt tacaggcagc cccgggaaca atctcggcgt gctggtgaca attgatgagt 60
gacatgttga agattcctgt agcacgtg 88

<210> 1883
<211> 358
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-H6

<400> 1883

aattcccggt tcgacgggta ccataaacct tcctcaaaac atccaccata cctacctatt 60
atggcatttc catatacatt ccgagatata ttgccatgca actttccacc atctagtcca 120
tcatgacaca ctgcgtcattg tcatattgca tatcctggta caccgccgaa tgcattcaca 180
tagagtcata ttttgttcta agtatcgagt tgtaattgtt gagttgtacg aataataaca 240
gtgtgatgat catcactatt agagcattgt cctagtgagg aaagaatgat ggagactatg 300
attccccac aagtcaggat gagactccaa acgaatgaag agaggccaaa gtagccca 358

<210> 1884
<211> 423
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-046-Q1-E1-H7

<400> 1884

gtacctagtc agaattcgcg ggtcgacggg gatgggtgtt gcccccatga tcacattggt 60
tagtttctctg agaacaaaga agaatgggtc acacgttgcc tcgtgaggac tggaagcccc 120
atattctggc catgagccca tgatcatgct cctgggagaa gcaaaagttg tttctttagg 180
ttttgcttag gatgtacaca gatgtaaatt aattaccaat ttactatgct tcgtctaaag 240
aggtgacaag gcatgcaagt gatgagtcac ttcgcagcca agcaagtact gtacctgttt 300
cgcgttaaac ctcaccttac tgccagctta ctggtggtgg tgccaaacaa tggttttcaa 360
ctgacttctg atttacatgg tacaaaanan aaaaaaaaaa agaaaaaaaa aagcggccgc 420
tct 423

<210> 1885
 <211> 295
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-H8

 <400> 1885

 ttccccgggcc gacgggggagt gagacgctgt actgcttgct ccctttcggc atttcctttt 60
 taccaccact actgcttaag tgtcttttga agtttggttg aagtgttcct cgtcgttggtg 120
 gatcagtatt tggagtttga gtcagttgag tgtgttgctg ctgatgtatt tcaaagcaca 180
 gtggatcagt atttgagatt tgagtcagtt gagtgtgttg cgtctgatgt atttcaaagc 240
 accgtgtgat ggtagactcg ttatattatg aaatgatgtg gtttttttgt ctggt 295

<210> 1886
 <211> 367
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-A1

 <400> 1886

 taccggtcca gaattcncgg gtcgacgggg acctccagaa ggtgatggac cggagcgacc 60
 tcaccggcgc gcgtgcagcg gcagatgctg ccccgactt cccctgaaa ggacctggct 120
 gggacgtcgt ggtggctgcc gggggcggta tgctctcagc gtcaccagc tgagccccgg 180
 gcccgctcca gtgaccggcc tgtcaacggc gaccgacgcc ttggtattct ggtgcttcgg 240
 ctttgctcgt cgctgtgtt aaggccgatg tttttgtgaa catgatgtgg acatgacaac 300
 ggcacacctac ccccccctaa taattatgga cgaccgaggc gttgcattgt gtactgtact 360
 gcacccc 367

<210> 1887
 <211> 351
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-A10

 <400> 1887

gggtcgacgg ggacgacatc cacaagttcc tacactttat tgatcgtctt gaggtccttg 60
 tgggggtgttt caatgggtgga aggctacgtg ggatatgtgt gccactgctg cacacgttga 120
 acaagtccaa ctgtgctgag aaacttatgg tacgagctgt tttctgttat atattttgtt 180
 cataaactct ttcttataca cagttttaca gctttgatct tcttgaaata gaaactgccc 240
 agttgtattg ttcctataca gatgcctgac cattgccggg tcagacttgc acttggtcac 300
 aacatgatgt ttatgtcaac ctactccatt ccccttggag gtgaaaatat a 351

<210> 1888
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-A6

<400> 1888
 gtacggtaga gaattcccgc gtcgacggga tctacgacc catcaacgaa tcatatttct 60
 cgggtcaagat gttcgaggga gtcattgcaa catcttaca tgaagggtgac aagttcttca 120
 ttgateccat gaagctgctg cccctttcac gcttctgcc gcagccaaag ggctctactc 180
 caagaggtgg ttgtcgcggt ggaagaggtg ctggtcgcgg tggatttggg ggccgtgggtg 240
 gattccgtgg aagaggtgca ccaaggggtc gtggacctcc caggggtgga gggcgtgggtt 300
 tcagacgacg aggcagattc taggatgtag ttttaagttg gctgtttggt gaaacacgat 360
 gttctacagt atccgttcag ctggaaacat tatgctaagt caactgtgag cgctctttc 419

<210> 1889
 <211> 374
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-A8

<400> 1889
 attccccggg cgacggggcg cgagatcaag ttgcttaggc tcctaagaca cctgatatt 60
 gtggaaataa aacatattct acttctccg tcgaggagag agttcaagga tatatacggt 120
 gttttcgaac tcatggagtc tgatttgac caagttataa aggcgaatga tgacttgact 180
 ccagaacatt atcagttttt cttgtatcag ttgctccgag gattgaaata catacatata 240

gcttcttgca gcaaatgtat ttcacgaga tctcaaacca aagaatatct tggctaattgc 300
 tgattgtaag ctcaaaatat gtgacttcgg tcttgcaagg gtagctataa gtgatactcc 360
 aaccgccata tttt 374

<210> 1890
 <211> 446
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-A9
 <400> 1890

taccggctct aaattcacgg gtgcactgtc cggacacaga agccttagca gctttcaaac 60
 acaacttccg attcaaatgg ctgccaggc acctcgtcaa agaaaagcca agaacaatgg 120
 ccgcattaac aagcctcatg accctctttt gcgcgggaga ggatagttgg ctggcacgat 180
 gcagtaccag cgaccaagt acatccgaag tcaggaatgg aaacgggaaa ccatgacgca 240
 gcaaggacca gcgccggacc aagggaaaca gcccgaagag cacggcagtc aacctggat 300
 tcaaaagctc tcggcagaat cataaaaaac tacccttaa ggataacagg gacgagctat 360
 ctagcttaaa caaatcttg gacaagatat gccaaatcca cagtactccc ggtaagccta 420
 caaaccatac ccaacaagat tgttgg 446

<210> 1891
 <211> 447
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-B10
 <400> 1891

gggtcgacgg gagggcgcta cgggtgttgg cttacgaagc tcggatgact gtcgtctcag 60
 cttgttttgt aatcggatac ggcggccgat acgcgtcagt tataagcca ttgagcttgt 120
 tgcttccgtg caaaacatgg aaagcccatg acccgtaaag aaactaacca atacgacgct 180
 tattaatatag agtatatata tatatatata aaaagagtat atatagaaaa aaactatagg 240
 ccgcttattg cgagcgagat agcctagcat cgggtcaaagc gcttccttga ttctgctcac 300
 tataaattag agcaattttt cattcttga aattgcggtgta acattacata tataaataat 360

tatgatcagt ttaaataata aataagttaa aactatcgca aaacagttaa acattcacgt 420
gttaaaaagt tatagcatat atcgaat 447

<210> 1892
<211> 448
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-B2

<400> 1892

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gggggtgttg atggtgtagg agtgcggtgt gaggaaggaa aaatgtgctc aacaaacatg 120
acatgacgaa agacataaac gtgtccgggt tgaaggtcga gacagcgata gcctttgtgc 180
tcgtcagaga agccgagaaa agcacatggg atagagcgtg gtgacaattt atttgcagaa 240
gtggcgtagg cattgggaaa acagagacgg ccgaaaacac gaaccgcgga gtagtcgggg 300
tgggaaagaa agaggaaata ataggggtgta ttgttgggtt tagttttaga aggtcgaata 360
tttagaagga aggtggccat gtggagggtc tcagcccaaa acttgagagg catagatgat 420
tgaatgagga gagtgcgaac tatatcat 448

<210> 1893
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-B3

<400> 1893

gggtcgacgg gacatgttca gataaaagag agagttgtct tgtgctcaca agcacactag 60
ggcagttgcc atgtaaaaga aagagttacc gtctgcttac gtgcacgcta gggcagttgc 120
catgtaccat gcaaaaacac atggcaattc gggtaaaaga gagttagcat ctgcttacia 180
gcaaagctag ggcagttgcc atgtaccctg cagaaacaca tgtcaactga cagctttggg 240
tgtggcgagg agacgggctg gtgggcgaag tgataaacac ccacacacca gccccctctg 300
cgtgcgtgaa aactgatgtg tgggcgaatt gctaaacgcc cacacaacag cccccgtgtg 360
gtgaaaaaga acggtgggag accggatgaa tgccac 397

<210> 1894
 <211> 410
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-B5

 <400> 1894

attcgcgggt cgacgggcca gaataaatat gctaaggagt ccaataaata aaccgatgat 60
 atttttaga tgtttgggga tgttctggac ccaatgggtga tgactatccg agtcgggtcc 120
 gggacagctt tcggacgcgc gcgtggagag ccgcgggcta ctgagagagg ttaggttggg 180
 cctggcgggtg aatggtagtg gactgtggag agtgggttgg tgtaggagaa gaggggagag 240
 aagcaggccg gcacgggttc cggagaccga aaatgtccga cgaaaagacc gactaatatt 300
 gccgctatag tttaacgggtt gggctatcga acgaactccg aatgcgatga aacttggcag 360
 gcggcctacc tacactaaaa ccacaccgca tgccaacttt catcctaata 410

<210> 1895
 <211> 429
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-B6

 <400> 1895

gtaccggtac agaattcgcg ggtcgacggg atcatctttg ttgacgcgaa gtctctcatg 60
 acatccttta atatttctgg agttgcgttc caaactttag ggtttcaaca tccttggcat 120
 gagccatggt actactgtcc ttcagtcctt gatgaatctc ctgtatcata agatttttct 180
 cctccaactt ggctactttc agtttctggc tcctgatttc ttcacgaatt gcctccttgt 240
 caaatatgat ttctaagggt tccacctaaa attcttcatg taataactcca gatcccggcg 300
 atacaccagc taagggtaaa gttgcacact ttgctgacag atgctccatc agccttctac 360
 catccaatcc ttccatgcat acgcttgctt aactccgcac gatgacaata acataagagg 420
 tcgataaca 429

<210> 1896
 <211> 453

<212> DNA
 <213> *Triticum aestivum*
 <223> Clone ID: LIB103-047-Q1-E1-B8
 <400> 1896
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 ggaaggcgaa tggaaccaa agctgaaatg gtttctagcc aaggtaagta attaagtagt 120
 actagctagc tagctagctg ccatctcttt aattatcatg cttgattaat tattatctaa 180
 tcaaattaaa ttccattctg gtaataaagg ccctgaagca ggcgagggg actgatctgt 240
 gtgcattctg catttgcgag aacattcgca tgatggcgtc cgaaaggagc agatctcaaa 300
 gacaggaatg ggtacgcttg tcagaacact attcacaatt ttacaccat tattgatatc 360
 tagtcacaca actaatacac atgcatattg atctccttaa tagttcaaag aggtgcggga 420
 caagctccta acaacgaagc gcgtagaagc act 453

<210> 1897
 <211> 437
 <212> DNA
 <213> *Triticum aestivum*
 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-C1
 <400> 1897

tacggtcaat atttccgggt cgacgggagc tagcagtggc gctagggttt tgacgaggtg 60
 gagaggtgga agaaggtttt cttgacggca ggggacatgt atttataaag aagtgtgcgg 120
 cacagtgcaa ttacgcaggt acccctggct gttcacatct gaggggcatg tggcaagcac 180
 gcaacatact cagagttgtc ccacgttccc acgcccgcga ggtttgtcgg atggttggtc 240
 cggcttctcc ggatttcaac aataaggatg aatcatttaa aacaaactta atgtttgtct 300
 ctgtgtcttc tgctgacaag gatgcagaga agacatttga cagtttcaat agtatgcata 360
 tgatttggac agatagagtt tgagatagaa agcatagaga gattanggtc cgatcacatt 420
 cacttagttc aaaagtt 437

<210> 1898
 <211> 232
 <212> DNA

<213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-C11
 <400> 1898
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 gcaacgacat cgagctcgtc tcccgtccg cgcacctcat caaccagaaa tgccacgtca 120
 agaacaagga tgtcaggaag ttcttggaag gtatctactt cagcgacaag ggcgccatca 180
 aggaggagta nattgcgaaa aaccgtccca ccaaaaccct tgtttctgcc tg 232

 <210> 1899
 <211> 413
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-C12
 <400> 1899
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 atctggagta cgccaatgca ggattatctt caaggcttag ccttgcatte tgggaccagg 120
 atgatccgta tgacatgggt ggggatcact gcttctgcc tgggtggcaac gggaggcttg 180
 tgcaggccct ggcagagaat gtgcccattg tttagagag gacagtgcac actatacggg 240
 atggagggga tgggtgtcag gtggttgtca atgggtgtca ggtgtatgaa ggggacatgg 300
 cgctgtgcac tgtgccactt ggggttctga aaaatggggg tatcaagttt gttactgagc 360
 tgccacaaag gaagcttgat agtatcaaga aactaggctt tgggttggtta aac 413

 <210> 1900
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-C2
 <400> 1900
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 tcctttctct aggacatctg ccgtgacaaa cccacaacat atggctagta aaagagttta 120

taaaccatag agaagttgga atacagtagg tttaacacca atataaataa ataatgagtt 180
cattacagta ccttgaagtg gttttttgtt ttctttcgct aacggagctc acgagatttt 240
atgttaagtt ttgtgttggtg aagttttcaa gttttgggta aagatttgat ggattatgga 300
acaaggattg gcaagagcct aagcttgagg atgccaagt caccccaagg taaaatacaa 360
gggcacaaaa aagcctaagc ttggggattc cctggaaggc atcncctctt ttgtcttcgt 420
tcatecggtaa cttta 435

<210> 1901
<211> 392
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-C6

<400> 1901

attcgcggtg cgacggggtg taggtgctg ggtcttttga ggagcctcct actggattga 60
tactttggtt ctcaaaactg agggaaatac ttacgtact attgctgcat caccctctcc 120
tcttcgagga aaaccaacgc aagctcaaga ggtagcaaga aggattttctg gcgccgttgc 180
cggggaggtc ttcgtcaag tcaagacata ccaagtacc atcacaaacc catctccctt 240
gcatttacat tatttgccat ttgcctctca ttttctctc cccacttca cccttgccgt 300
tttatttgcc ctctctttaa caatcttctt ctctttttc cgtttgcctt cccgttgcca 360
tggccgaatc aaaaagaact aagggccctt tc 392

<210> 1902
<211> 409
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-C7

<400> 1902

ggtaccggta ccagaattcc cgggtcgacg gggaggaaga gcccaggag gagctaggaa 60
ctgaatatct ggtgcagccg cttggccgtg ctgaagacga agagcattcc agtgacttcg 120
agccagaaga aaatggtgat ggtgctgagg acgaggagat tgaggatgac gatgctgagg 180
atggtgagga tcctgtcaag gcgcaatcct catcaaagag gaagaggtct ggtggggagg 240

atgaagatga tgacgacggt gatgatgatg gtgatgatga tgagaagcct ccatcaaagc 300
gatagtcaat ttgttcgtgc tgatctgtga tcttctctgc ttgggccaag aaggaaaata 360
atcctcatgg agaggattgt tggtaaattgc tgtagcttta ggacatctg 409

<210> 1903
<211> 418
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-D1

<400> 1903

acggtcctag aattccgggt cgacggggga aacaatgctt cttcagagaa ctcttgatgc 60
aatggttgat gtcgtttatt gtccgagatg tcaaactgct tgcttggaag atgcaggatga 120
tgaagccgtg tgtccaagtt gtttgttcag cttctgcgca cttttagtagag ggcgacgtca 180
tgttgggggtt gaatgtttat ctgcagaaga aaaacttcaa attttgaggg aacgtcaaaa 240
gtctgcacga acaaagggag acatccagaa gcttatggat gaagtatgca gtatcaagga 300
aattttgaag gatgcaaagc agtgcccgcga ttgcaagatg gctatatcta agattgaggg 360
atgcaataag atgacctgtt ggaactgcgg tggattnttc tgctaccaat gcaacgct 418

<210> 1904
<211> 463
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-D10

<400> 1904

cggtcctaga atcccgggtc gacgggttat gcacaaaaat gcatcgaaaa ctcatataat 60
gcataaaaaat gtccaaacga accccgaaaa atcacaaaaa atcacacaac actcctgttg 120
ttctatgttg acacgagaaa aaaaaattga aagcaataag aggcaatgga tatcgttccc 180
tccccaaagc tggggcggtc cctatcgaaa accatcatgc ttcttgtagag aagctccggt 240
ttgtgagaag catataccca aacctgcccc aaatgggaca aaacttttgt aatggcatgt 300
tgatgctgct ccatgatagc atgccaagtt tcatgaattt tagacgagtt ttggatttac 360
tagaatttaa aaaacaggca tctcaatgtt ttgccggcaa tcaacggtgc cctggtgttt 420

gaaattcatt occatttctt gcatgggaac taagcatgca ccg

463

<210> 1905
<211> 257
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-D11

<400> 1905

ggtcctagaa tcccgggtcg acggggccgc cgcggcagtc cccctcccc gagtacacgc 60
tcgccgccgt ctggatccaa gcagggttatt gtgtgaagtgc ccacgtgtcc acatggcttc 120
agcggcgcaa gatttcacgc cccggacatt ctccatcana ctgtggccac cgagtgaag 180
cactcgtctg atgcctgtaa aaaaggataa caagaaactg tcctccgaat tcaacctttc 240
ccccagtta tggcctt 257

<210> 1906
<211> 443
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-D12

<400> 1906

ccggtcaaga aatccccgggt cgacgggggtc accatcctgc ggtccgagaa ggtcaaggac 60
gagatcgtcc tcaacggcaa cgacatcgac ctctctctcc gtcgccgc cctcatcaac 120
cagaaatgcc atgtcaagaa caaggatata angaagttct tggacggcat ctacgtcagc 180
gacaagggcg ccatcaagga ggagtagaga gccggaaacc gtcccgcca ccagaagccg 240
tgtttctgcc tgccgtgttt gtttcacgt gtntgtgtct gtctgtcgtc gtctgtctcg 300
tgattttgaa ctttctctag actgaatctt gtagcggagt taaattttta aggatgtgcc 360
gtggaacatg ctatctttaa tggtatcctg catatcgtcg ccgccgcgag aaccgggtgcc 420
acgcttatct acccctaaag gct 443

<210> 1907
<211> 461

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-D2

 <400> 1907

 accggtccag aattcccggg tcgacggggg agagagagag agagagagag agagagtcca 60
 ctgcccgtct tcccctgagc tccttcgccg gcgaacgccc aaagccccgc atggagatcc 120
 tccaacaagg cactatgttg atgttcccg g gatggatct tacgaaaatg gatcctccaa 180
 ctcttaccct tcttgagca gcttgttggt taatgttggt tatgcatttc acagtacagc 240
 tgggtatcaca gcatcttttc tattggaaaa atcccaaaga gcagaaggct atactcatta 300
 tagtgctgat gcctccgtta tatgctataa cttcctttgc tgggtcttctg gatattaagg 360
 gaagcaaaac gttttttaca tgtttgaggt ctgttaaaga atgctatgaa gactgggtta 420
 ttgctaagct tctggcattg atgtacagct acttaaata a 461

<210> 1908
 <211> 384
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-D3

 <400> 1908

 ggggtcgacgg ggaagaagac caaggccgag aagcggccgc ccaagtccaa ggagggcggc 60
 gccgacaaga agaagaagaa ggccaagaag agcgtggaga cgtacaagat ctacatcttc 120
 aaggtgctga agcaggtgca cccggacatc ggcatctcct ccaaggccat gtccatcatg 180
 aactccttca tcaacgacat cttcgagaag ctggccggcg agtcggccaa gctagcccg 240
 tacaacaaga agcccacat cagtcgccg gagatccaga cctccgtccg cctcgtcttc 300
 cccggggagc tcgccaagca cgccgtctcc gagggcacca aggccgtcac caagttcacc 360
 tcctcttaga tacgccgttc cctg 384

<210> 1909
 <211> 442
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-D5

<400> 1909

gtaccggtac cagaattcgc gggtcgacgg gaaactgtgt ggttgtgcmc tgctgcgtgg 60
gataaggcgg atggataact ggcgcgtggg gcctaggaca cgtgtcgatc gctagacgcg 120
gcttacaatc gcgtgagatc agtcggttgg aaagaagcgt tttccgaatt ttatagatat 180
tgggtcattt agaaaatacc atcttattct gccatattca ttataatttt tatggcatga 240
gcatctacaa aaatgctcag gtagtatgcc gttgaacaac atttttttgt tgtgaacctt 300
gttacatgtc tcatttgtga tttctgagag gttggtaggc aagatctgaa aaaaaaaac 360
ttctatactg tttttcttgc agtttcttca cctggttcac tgatacagag cacaagagcc 420
ttgccggatg gggtgcaaga tg 442

<210> 1910

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-D7

<400> 1910

gtaccggtac agaattcgcg ggtcgacggg tctcaataag tattttattg aaaaaccggt 60
cgtgacagtg ggtctcattc aatttttaaag ccgagggctc ctggaaaagg gaaaggggtg 120
gtcctggggg ggggtttttg tggtgggacg gtgtgcmgaga gataacatgc cagataatcc 180
agacaatcac atttctcccc cacatatggg ctcgatttga aggagttcag attatccaaa 240
tagttgaatt ttggagagcc tgcaaggcmc ccgtttgacg tcctagcmga tctggatgta 300
tgagggagaa agacgttttg accttggtga tgaccttaat tatttgtttg attcatttat 360
atgtattgta gctcgtagca acgcacgggc gttctcctag tatacttggt attcaagata 420
tgtgaaactt tc 432

<210> 1911

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-D8

<400> 1911

gtaccggtac agaattccgc gggtcgacgg ggccactcac agtgatgacc atagtttgag 60
gagttcatgt attcaccatg tgtaaatgct ttgggtctggg actctattaa aaggaggcct 120
taatatccct tagtttccgc taggagcccg ctgccacggg agggtaggac aaaagatgtc 180
atgcaagttc ttttccataa gcacgtatga ctatatccgg aatacatgcc tacattacat 240
tgatgaattg gagctagttc tgtgtcacc tatgttatgg ctgttacatg atgaaccaca 300
tccggcataa ttctctatca ctgatccaat gtgtgcgagc tttccatata ttgttcttcg 360
cttatttact tttctattgc tattgttgtc atcactataa aacaccaaaa ata 413

<210> 1912
<211> 446
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-D9
<400> 1912

gggtcgacgg gttgctataa aatgatagta aagcatccaa gaatgataat atagcagcat 60
gaatacttca taaattatcg atacgttgga gacgtatcag catccccaag cttaattcct 120
actcgtcctc gagtaggtaa atgataaaag aaataattta tgaagtgtga atgctagcaa 180
agtgcataag ttgatcaat gacaatttca atcacttttc ctagcttcat aacaacaatt 240
ctttcctata aaatttcaca tgttaaagta gcaaccaatt cacatgttaa ggttcanaca 300
acaaattctc ttaaaaaccc acaacctatg ttatcagttc acaagcaatt gtaattcaat 360
ttattcaacg gaatttaact aagagctcca catactcaac catcatatag ttttctagga 420
ttgctaacac tcaccgcata cacatg 446

<210> 1913
<211> 445
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-047-Q1-E1-E10
<400> 1913

cgggtcgacg ggcaaggatg atgtttccat attaggaggt gagagtgatg atgtgccatc 60

ttcggccttc atccaaggcg atgatgacgt tcccttcgac cacggcgacg tatgatgatt 120
 tgagtgactt gtgccaccat attgagagtg agagtgactt caccactagc cccatatttg 180
 atgtgttgcc atgattccca tgtaaggaga gccacaaccc caccacttga gtgagatgag 240
 tgactccacc atatgtgaca ttgagtgcac ctaccttgac ggagtgagtg aaccaccaca 300
 tagagagagt gaggtagctg atagggcatg tgaggccact atgatttcta acaacttaat 360
 ctctacttct attgtgtcct ctcatcttgg gctaggtccc atgtatgatg acacgccgat 420
 tcacgacgac ttcgccctcc atttg 445

<210> 1914
 <211> 197
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-E11
 <400> 1914

gggtcgacgg gtgaacatgg tgcagcactg cctgcccagg gaggtggtga acctgatcgc 60
 gtgccatggc cctgagctgg tggagcggca cgacgtgttc ggcaagtgga acgcgcgcct 120
 caccatggcc ggcttcaggc cgtcgccgct cagctcgtg gtgaacgcca tcatcagcac 180
 gctgctgcac agctact 197

<210> 1915
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-E12
 <400> 1915

cggggtcgac cttctggtgg cagagcttct gcggattctt catcatcatt atattcgctt 60
 tctctgaacc tttcagcacg acatggggcg tgctgaacga atcccctttc tcaagcgcga 120
 attgccattc attgggtgtg atgtggaacc agtcctagtt tgaagtcacg gtcgccttca 180
 cctccacata ctctgcggcg ccaccctcgg gagtgatgac aatgtcatag ggaagccccg 240
 attccttctc ttcgttcacc cacttgacat tgctaggtcc cagctgcccg gcaagggtatt 300
 ggtgtaccgc agcttcacca agcctgccgg ttcttgaccg ctcatctggc ttttgaactg 360

tggttttaca aggtgtgcca gctcctagct cgcttttcac ttctgcaaca tcagc 415

<210> 1916
<211> 441
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-E2

<400> 1916

cggtccagaa ttcccgggtc gacggggagg aagagcccga ggaggagcta ggaactgaat 60
atctggtgca gccgcttggc cgtgctgaag acgaagagca ttccagtgc ttcgagccag 120
aagaaaatgg tgatggtgct gaggacgagg agattgagga tgacgatgct gaggatggtg 180
aggatcctgt caaggcgcaa tcctcatcaa agaggaagag gtctggtggg gaggatgaag 240
atgatgacga cggtgatgat gatggtgatg atgatgagaa gcctccatca aagcgatagt 300
caatttggtc gtgctgatct gtgatcttct ctgcttgggc caagaaggaa aataatcctc 360
atggagagga ttgttggtaa atgctgtanc tttaggacat ctgtggtagg tgtagcagct 420
caaacttgag tctaaccatg t 441

<210> 1917
<211> 450
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-E3

<400> 1917

acggtccaga attcncgggt cgacgggcag gatcatgatg ctgtcaagag aacttatttt 60
cctggactta aaaatcttag tactaaaaac gtgcgaccaa tagtgttcgt attgaactac 120
ggtcacatct atttaggaaa gatggtaaca tttttactat ttgtcctcgg tgcacttttt 180
gcatacatta tttttaagct aaacttcatt gctaattatg ttactatacg atgttcttca 240
acagggactc tcgatgatag ttgtgcctta gtggatcgat actaaaggtc acatgtcaat 300
ggttagatta cgaccaagac atcctacatt gcacatgagt gcatttagga tttctaaaac 360
cgaggaatgc ttaatagtga aagactagag cagaattgtg aatgatcgca gagaagtact 420

aaggggcaac aatcaaaagc ccaacccaag

450

<210> 1918

<211> 434

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-E4

<400> 1918

tacggtccag aattcccggg tcgacgggac cgcagattgt gtgggggtgcg aggaagagga 60
ggacgagaag cgagacactg cccattgatg ccgccacctt gctgccagga gaaggagaga 120
agaggatgcg gggacctgga ccagatgcac aggaggacga ggctgttcaa gcggttgaag 180
ccgctccagc aaagcgggct caccggttca accccaagta cgatgcgacc ctgtggatca 240
cctgctgagg tgggtctgaga agccacatcg gcgccgggca cactgacaaa acaatggttg 300
ttcgactttg gcaacatcaa tgcacatagt atcgtttcac ctatgacccc cacaactcaa 360
acacattaca catgtacacc atagatgtcc agggaggtaa agtccctttt tttttaacca 420
tttcaactgt tggt 434

<210> 1919

<211> 451

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-047-Q1-E1-E5

<400> 1919

gtaccggtac cagaattcgc gggctcgacgg gaaacaatat ggggggtaac ccatgaatgg 60
gcataagatt atctctcgag ttgaacatat cgaatacatc aagagtaagg tacgaaggta 120
caataagagg ttccaagtgg atagatagtt gctcgaagtc tgaaccagag tgagaaaggg 180
tttcagagca gcgagagtaa gtattgcgtc tgttaccaga atatagcatt aggaaggtgg 240
cccgtgaatt aaatacgaag ccaagcgcga ggaataactt cgacaacagg gggatatagga 300
gagtcagggtt ttgatcctgt ggaactgtgg gttatgggcc caccatgtgg gttagaagta 360
ggaagggcgg aggcgtcttg cgtgatcatg caagcagtat gtcanggggg tagcctgtcg 420
attatgtcgg cgacaacgtc cataccaaga g 451

<210> 1920
 <211> 397
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-E6

 <400> 1920

attcgcgggt cgacggggaa gtcggccgcc aaggagggcg ggcacaagaa gggcaagaag 60
 aaggccaaga agagcgtgga gacgtacaag atctacatct tcaaggtgct gaagcaggtg 120
 caccgccaca tcggcatctc ctccaaggcc atgtccatca tgaactcctt catcaacgac 180
 atcttcgaga agctcgccgg cgaggtcgcc aagctggcgc ggtacaacaa gaagccaacc 240
 atcacgtccc gggagatcca gacctccgtc cgctcgacc tccccggcga gctcgccaag 300
 cacgccgtct ccgagggcac caaggctgtc accaagttca cctcctctta ggctgttcgt 360
 cttcctgtgt ctcgantta gctgttcggg tgtgttt 397

<210> 1921
 <211> 398
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-E7

 <400> 1921

gtaccggtat agaattcccg ggctcgacggg tttgggtaca accttgggtt tcttcactag 60
 agcaccaact gatttgccgt ttcattgaagt atcccttctt gcccttgccc ttcttgaaac 120
 tagtggtttc actaaccatc aacaattgat gctccttctt gatttctact ttcgcggtat 180
 caaacatcgc gaatatttca aggatcatca tatctatccc tgatatgtta tagttcatca 240
 cgaagctcta gtagcttggt gcaatgactt tggagaaaca tcaactatct atctggaaga 300
 ttaactccca ctcgattcaa ttgattctta taccagaca atctgagtag aagctcaacg 360
 attgagcttt tctcccttag tttgtaggct aagaaaat 398

<210> 1922
 <211> 388
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-E8

<400> 1922

aattccccggg tcgacgggcg aggcggactt ggccgagtc atgctttcct ggtagggag 60

agcctccaac acaagagaga gagagagaga gagcatcgtg actgccatgg cttgaactat 120

tttgctgaga tcctggaaaa attgaatggt ataattctgt taattgggaa ccttggaatt 180

gattttcacc tgaaaagggt gatcgagggt cggataatgg acgtaacaca gctgctagag 240

aagatattat aatatggaaa atagcagatg aggagcaagc tgaagttggt agatcaattg 300

agcaagagtt ccagaccag gttacaccaa gaacaagtgc ctcagattat tcatttttca 360

ggcagcgga ggatcactcc ccctccac 388

<210> 1923

<211> 411

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-047-Q1-E1-E9

<400> 1923

gggccagaaa tcccgggtcg acgagctcga ctgctacagt tttcagcagg agtccatgc 60

ccgtggaggc ccatggcatt ggcacatcc caacaaaatt gatggacgaa gtaaccaact 120

gccaagtact tcaaggaaac taaatgcttt acaatactcc aaatagccaa tgcgactctg 180

tttttaagac cttttgcaca ttataagac cctgttttta tacatctgtg taaacagtcc 240

aatgtgattc taactgatga tagttcatct agaagaaaaa ggagaagggg caacatggag 300

aaagacggcg tgctgggtgt catgatcttg ggctttctag gctccgtcgc ggtaacnctc 360

ggcttcgtcg ccaacaacta tagctccaag cgtaaagagc tatgtgagcc c 411

<210> 1924

<211> 409

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-047-Q1-E1-F1

<400> 1924

accggtccag aattcncggg tcgactggta ttgaggataa agaattgaga agaacactgc 60
agtcacttgc ttgtggcaaa gttagggttc tccaaaagac accaaaagga cgagatatag 120
atgataagga cgaattcgta tttaatgaag atttttagtgc tcccctttat cgcataaagg 180
tgaatgcaat tcagatgaag gaaacagtag aagaaaacac aagcaccact gagagagtat 240
ttcaagatcg tcagtatcag gttgatgcag ccatagtctg aattatgaag acgaggaaaa 300
ctctcagcca cacccttcta ataactgagc tttccagca gctcaagttc ccgattaagc 360
cagcggatat gaagaagaga atagagagcc taatcgacag ggagtacct 409

<210> 1925

<211> 361

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-047-Q1-E1-F11

<400> 1925

cgggtccagaa tatcncgggt cgacgggatg tgccactttg gggtcacgac tagccatgtc 60
agcccggggt ccttatcata tggatgctag tgacactatc atatacgtgt gccaaaagac 120
gcaaacggtc ccgggcaaag gtaaggcgac acccgtggga ataccggtgcg tgaggccgca 180
aagtgatatg aggtgttaca tgctagatcg atgtggcatt gagtcagggt cctgacattg 240
aattggaagc atcattgtgt gcttgaattt tctgacggc cttctaaatt ttcattgata 300
gagtagtaat ctccggggcc ggggtatttt tccctccaat gaccgggagt tcttgaatgc 360
a 361

<210> 1926

<211> 370

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-F5

<400> 1926

taccggtaca agaattcccg ggtcgacggg gtcaggaaga tttctcgtgt taatctcatg 60
ggctccaagt cgcaagctat tcctactgcc acagaaaagg ttatcgact ggaagcgtgc 120

ttcagccgca gaactaatgt ttagtaatgt cgatgtagat ctactcctca tccttgccat 180
 agtggtcatc catacagagg ctgtttggta ccagtttctg gaactcattt ttgtttgact 240
 gatacatctt ggtcaatatc agcttctgga attaacgtat atctgtataa ttcctagtta 300
 ctatttttgt cgagctgtaa ttccctttgt tttttctaca ttacggtgtt actacttgat 360
 gaaaacttac 370

<210> 1927
 <211> 403
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-F6

<400> 1927

accggtcgta cagaattccc gggtcgacgg gacaacggat gcctccaact aacaagagtc 60
 ccgggggaggt tttgtttcaa gttattttga tttgatttgc ataaagcatg ggactgggca 120
 tcccggtgac cagccatttt ctctgtgagtg aggagcggag tccactcctc ttgagaataa 180
 cccacctagc atggaagata cagacaatcc tagttgatac atgagctatt cgagcataca 240
 aaacagaatg tttatttgaa ggttttagagt ttggcacata caaatttact tggaacggca 300
 ggtagatacc gtatatagac aggtatgggtg gactcatatg gaataacttt ggggtttatg 360
 gaattggatg cacaagcagt attcccgctt agtacaagtg aag 403

<210> 1928
 <211> 406
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-F7

<400> 1928

gtaccggact agaattcgcg ggtcgacggg caattagatt tgtttttagat tcatcttcag 60
 catgaggaaa gaaagaaaga aaggacgaaa gaaagaaaga aaagatgcmc acgcacgctt 120
 gaggtcggcg acggtggtgg cggaggcggg gaatgagacg gcgaggcggg tgcccaggct 180
 cgtctccagg aacaccgtcg ccacctccat tcgatcccct cgttgccgga ggcggaggag 240
 gcggagcggc gtcccgaat ggaaagctct cctctgcttt ggggtttctc caggagcaag 300

aggccaagag cagaggaggg gaggccagcg gaccacgtga cgtgacggcg ctccctctcc 360
tctcctctcc tctccgggtca cactacttct agactcttgt tgactg 406

<210> 1929
<211> 433
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-F8

<400> 1929

attcccgggt cgacgggcac atatgaagat aaggaagaaa gagatgttta tttgctgtcc 60
aaaaagttct ctacggtcac ttttggccca agagaagata gagtccaagt ctctcacgtt 120
ctggattcag attcggactg cacagacata cctgactcaa aacgcacaca agtttttcat 180
acggactcca aattgggtga ttcttttttt gttggaaact agattttgtc cactttccaa 240
ccaattgga atcacattca aattcgtccg gagcgttgag ttgtggacga aacaatctga 300
tgctgcagca gaatccgagt caaactacaa gtccaaagggt gttacatcac ctccacttgg 360
gccattggc cttgtacgac ctagatttag ttttaggctg ccttgggacg tcctcccaac 420
tccttggcgg caa 433

<210> 1930
<211> 305
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-F9

<400> 1930

ggtccagaaa tcncgggtcg acgggtggaa cgatgaacta atcatattta caaaaacaag 60
agaggctcgag ttcatatcag cttttctcat ctccagccagt ccatcatata tcgttaaaat 120
tgcctttcac ttgcatgacc gaacgatgcg gataataata atagtgcaca tgcattggac 180
taagctggaa tctgtaagca ttcaataaac aggagaagac aaggcaatat gggttctttt 240
tgggtttttct cctatcgacc cctaaaaaaaa aaaaaaaaaa aaagaaaaaa aaaaaaagcg 300
gccgc 305

<210> 1931
 <211> 362
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-G1

 <400> 1931

 accggtccat gattcncggg tcgacgggat ctacatgtga agtggagtac atggcagcct 60
 cggaggcagc acatgaagct atttgggtga aggagttcat caccgaccta ggagtcatac 120
 ccaatgcgtc ggggccgatc aaactcttct gtgacaacac tggagctatt gcccttgcca 180
 aggagcccag gtttcacaag aagaccaggc acatcaagcg ttctttcaac tccatccgtg 240
 aaaatgttca agatggagac atagatattt gcaaagtaca tacggatcta attgtcgag 300
 atccgttgac taaacctctc tcgcgagcaa aacatgatca acaccagaac tctatgggtg 360
 gg 362

<210> 1932
 <211> 449
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-G2

 <400> 1932

 cgggtccagaa ttncggggtc gacgggttcc tatatataat tctttacctc cggaccattc 60
 cggacctcct cttgacgtcc gggatctcat acgggactcc gagcaacttt cggggtaccg 120
 catactaata tctctataac cctagcgtca ccgaacctta agtgtgtaga ccctacgggt 180
 tcgggagaca tgcagacatg accgagatga ctctccggtc aataaccaat agcgggatct 240
 agatacccat gttgggtccc acatgttcca cgatgatctc atcggatgaa ccacgatgtc 300
 aaggacttaa tcaatcccta tacaattccc tttgtctatc ggtacgacac ttgcccagaga 360
 ttcgatcgtc ggtatcccga taccttggtc aatctcgntt acggttaagtc tctttgctcg 420
 ttccataaca catcatcccg tgatcagct 449

<210> 1933

<211> 419
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-G3

 <400> 1933

cgggtccagaa ttcncggggtc gacggggagcc aagaagacca aggccgagaa gcggccgccc 60
 gcgtccaagg agggcggcga gaagaagggg aagaagaagt ccaagaagag cgtggagacg 120
 tacaagatct acatcttcaa ggtgctgaag caggtgcacc cggacatcgg catctcctcc 180
 aaggccatgt ccatcatgaa ctcttcatc aacgacatth tcgagaagct cgccggcgag 240
 tcggccaagc ttgcgaggta caacaagaag cccaccatca cgtcccggga gatccagacc 300
 tccgtccgcc tcgtcctccc cggcgäggctc gccaaagcatg ccgtctccga gggcaccaag 360
 gctgtcacca agttcacctc ctcttaggct angatggttt tctgtaatan tcagctgtt 419

<210> 1934
 <211> 427
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-G4

 <400> 1934

ggggtcgacgg gcaataatat caagtttctt ctttatgtgc tcaaagtttc gaagctatgc 60
 ttgttttgcc ttcctatgct agttgattat tgttcctata agttgttttc tcacaaaatc 120
 cctatgcata ggaagtgggt tagacttaaa ttttctagtc atattcttca tgatgctctc 180
 tttatgttac aattcctatc ttttatgtga gcatcattga aattatcatg cctagctagg 240
 ggcgttaaag gatagcgctt gttgggaggg aaccaactt tatttttgtc ccttgatttt 300
 tttctctgtt ttattaataa ataatttctc tagcctctgt tatgattgag tttttatgtt 360
 ttaattagtg tttgtgcaa gtagaaccgt tgggaagact tggggaaagt cttgttgatc 420
 ttgtgtgt 427

<210> 1935
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-G5

<400> 1935

gtaccggacc agaattcccg ggtcgacggg ggtcaccagg ggcttccgct acaagatgcg 60
cttcgtgtat gctcacttcc ccatcaacgc ctccatcacc gccgcccaacc gcggcatcga 120
gatcaggaac ttcctcggcg agaagaaggt gaggaaggtg gacatgctcg acgggggtcac 180
catcctgcgg tccgagaagg tcaaggacga gatcgtcctc gacggcaacg acatcgagct 240
cgtctcccg cccgccgcc tcatcaacca gaaatgccat gtcaagaaca aggatatcag 300
gaagtctctg gacggcatct acgtcagcga caaggcgcc atcaaggacg agtagagagc 360
cggaaaccgt cncgcccacc agaagccgtg tttctgcctg ccgtgtntgt ttcacgtgt 420
ttgtg 425

<210> 1936
<211> 422
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-G6

<400> 1936

cggtcgagaa gtattcgcg gtcgacgggg acgaaaggat cgtagttca tcgaaagtag 60
ttgttttctt cactggtacg ttaaataaag agttttgttt cgtagatata caatttaaaa 120
tgattgttat ggagagaata agaaaaccac tccattatat attagtagta tacacgagta 180
ctatatggac gcagcttcat tgacttagtg cacttgcctt tgggtgtatg ataggtgggc 240
ccaaaatgtg gctggccac ctgtcatata accaaaggca ggtgcagtta aggtaccgga 300
gctcagtcg taatacacta tatatgcagt aactatata agatggagcc tcagcgcttg 360
ttcgctaggg tttgcactct ccacactctc accgtactat acacgctgga ggctcagtg 420
tc 422

<210> 1937
<211> 396
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-G9

<400> 1937

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ggtccagaaa tcnccgggtcg acgggacctt caaactgctc aggcattcaa aaaagatgac   60
cttctcttct ttggtcagag cgtacctggc acgaccttga aaccattccg gatgccggtc   120
atcagggtct ttcaaactgt gctgggtcctg ccgtgcttcc tttgtatcat ttgtcttccc   180
atacacgccc aagaagctta tgagggtcac gcaaatatcc ttcttaacgt gcatcacgtc   240
gattgcagag cggacttcta agactttcca atattctagc tcccagaata tagatttctt   300
cttcacatg gctgcgtgcc cgtcagctcc ctccggaact gattgtccgc caggaacctt   360
tcgaaagatg actttcaaat ccttgaacat atcaaa                               396
  
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<210> 1938
 <211> 448
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-H12

<400> 1938

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aattcccggg tcgacgggta ttttgctagt atacatgtta gcagtacata caaggtgggtg   60
aattcaaacc gcacgcggtc gattaggaag aaggtgaatt caacaaggcg gaccgggtca   120
aactcatgga accacaactc ggagtcagat tccgagatag accggatata cgccatatga   180
gggtgatctc cggctcttcta tggatcttca gtgttttcgg cggcgccaca cgacacggat   240
gtaaaaagga agtggggatg gcaactcaata tgaacagctt tcaccctcca ggtgccaaagg   300
gttttaccgt atacattcca ataagctggg gttcctggat cggcaagagg agccaggacg   360
cgacggtcgt gttgtataca tcttctacag atagattgtg atcatcagaa tatgcatgca   420
gcctgtgctg tgctccctat gcatggct                               448
  
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<210> 1939
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-H3

<400> 1939
 accggtccag aattcncggg tcgacgggcg tgagaggccg gattcgggtc tatattggag 60
 ggggagctcc ggtctatgca gaggaggcag cccagcagcg gtctgatctg gccagggcat 120
 tgctgacggt tggaggatga gatcgatcca gaggaaaatt aatcgaaatg agaccgaaaa 180
 tatattgata gtccaagacc gatctgaaga aaccgataga gagaggagga cgagtcgcgg 240
 tgtctggaat aaactctaaa ccttgactct tgataccatg ctagaggagc aacttgattg 300
 tactaaacct tgactcttga taccatgcta gaggagcaac ttgattgtat taccatagcc 360
 catggggaga atatatggta caagagactt ggggtacacg taaggaaacc tagaccaatg 420
 agtacatata 430

<210> 1940
 <211> 280
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-H5

<400> 1940
 taccggtacc agaattcccg ggtcgacggg gacgtcgaag acagcggcga ctctgtgtgc 60
 gcgttgtgac gaggaggcgt ggcgggtccc cttggtggtg tggcctttgt gtttgtaatg 120
 tgttcatcct tctgttgtgt cgtttgtttc agaggggtgc gctgtgctgt tgtatgatta 180
 catctgtttt ctgtaaccgt tgttggtagt gacgctgtgg ataaaatata agtataacta 240
 cacttcata tgtgtttggt gtcctcagct ggattcaatt 280

<210> 1941
 <211> 471
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-H7

<400> 1941
 ggtaccggt aagaattcgg gggtcgacgg gttccataaa tcatgataaa tgtttattat 60
 tcatgctaga attgtattaa ccggaaactt agtacatgtg tgaatacata gacaaacata 120
 gtgtccctag tatgcctcta cttgactagc tcgttaatca aagatgggta agtttctag 180

ccatagacat gtgttgtcat tttatgaatg agatcacatc attagataat gatgtgatgg 240
acaagaccta tccgttagct tagcataatg atcgtttagt ttttctgcta ttgctttctt 300
cgtgacttat gcatgttctt cagactatga gattatgcaa ctctcgaata ccggaggaac 360
accttgtgtt ctatcaaacg tcacaaggta actgggtgat tataaagatg ctctataggt 420
gtcttcggtg gtgtttgttg agttggcata gatcgagatt aggatttgtc a 471

<210> 1942
<211> 259
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-H9

<400> 1942

gggtcgacgg ggtaccttta atagcctttg ttgacagtgg agctcagtca accatcatat 60
caaaagactg cgctgaacgt tgtgggttac tcaagcacct tgatcaacgt taaaaacggg 120
ttgctaattg tgttgggtcaa actgagatac atggaacaat acatgtatca gctacaaaca 180
tatgccatgc tttctaacct tgtaccttca gagtattgga tgatccaaat atggaaatcc 240
ttttcggact tgagatgct 259

<210> 1943
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E1-A10

<400> 1943

gggtcgacgg gctctcatga cttcacttat attattttga gagtctttta taacatcatg 60
gtatttgcta tgatcataaa gttgggtccta gaatgatgag catccaagtt gggatttaat 120
aaaaactatc atagaaagtg aattggatgc tatgatcaat ttgatgcttg ataattgttt 180
tgagatatgg aggtagtgat attaaagtca tgctagttag gtgattatga atttaaagaa 240
tgcttgtgtt gaagcttgtg attcccgtag catgcacgta tgggtgaaccg cattgtgatg 300
aagttggagc acaattttac ttagtgattg tcttccttat gagtgggtgat cggggacgag 360
tgatggattt ttctaccaa tctatccctt aagagcatgc gcctagtact tttgtttttg 420

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atga

424

<210> 1944
<211> 425
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-048-Q1-E1-A12

<400> 1944

cggggtcgacc ggcgcaagtt ttcgggtcat ggctgactat ccacgtccga gtccaccttc 60
agatcggtga gctgttgtgc tgtttaactg aactttcctt gtcaacaaac aacaggtctc 120
ttgggacttt cccttgctgt ggagtactag tcgaaacttc ttactcttcc ctttcccttt 180
tttttccaat ccaatcctca atactcacgg ataaccaacc tggccgtagc tttaggtgag 240
atgtagcaaa agtactactt ggtttaacac agtatatcag acaaaatagc agatcgcttc 300
ttctcgtaac ttgccgcaat gcctgatcat ctaaaaactt gaggagacta ttaatcttgc 360
cttggtttct aatgacagaa attgaccggg attcgacgga tcatatggtc gtancaacgc 420
tcaac 425

<210> 1945
<211> 387
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-048-Q1-E1-A9

<400> 1945

taccgggtcca gaattcncgg gtcgacgacc tcaacggaga ccagcaccac tgctaactca 60
atgatgggtg ctatctctca caatatatat attactttta tatgtgtcaa ctttaagggtt 120
tatatgtttg ggctgtgctt ttgtgatatt ttggactgtc agtgctttga ctgattttta 180
ccatctcaat gtttggcatt catgtaggtt ttagcattac ttctgcgctc gtggtatggt 240
accttgccat gtcgcatcat tagtttgtct tgtatgtggt gtttgtccat ctgctgagtt 300
gtatacttat tactcgtttt gtctgcgcct tttcttcatt gagtttacct agtgatgctg 360
ttctgttgcc ctctatgctg ttgttttg 387

<210> 1946
 <211> 445
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-048-Q1-E1-B12

 <400> 1946

 ggtccagaat acccggggtcg acggggggttt tgattttcttt cactaacgga gcttataaga 60
 tttcctgttg agttttgtgt tgtgaagttt tcaagttttg ggtagagatt ttttggacta 120
 tggaataagg agtggcacga gcataagctt ggtgatgccc atggaacccc aagatattca 180
 aggatagcca aaagcctaag cttgggggatg ccccgggcat cccctctttc gtcttcgttc 240
 attggttaact ttacttggag ctatatTTTT attcgccaca tgatatgtgt tttgcttgga 300
 gcgtcgtgta ttatattagt ctttgctttt tagttttacca caatcatcct tgctgtacac 360
 accttttttag agaagcctat ttgattagaa tttgctagaa tactctatgt gcttcactta 420
 gatcttttga gcttaataga ttttt 445

<210> 1947
 <211> 415
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-048-Q1-E1-B9

 <400> 1947

 ggggtcgacgg ggaaagtggc tatgaaattc tcccaacatg atgctgcggg tccttcaagc 60
 tgatgtgcgg caaactccac cttttccgca ttcatgcac cgtctgtggt caactctcta 120
 gctgtcttgt ggagccaatc atctactact atcggctcgg tgctactgga aaacaccggt 180
 ggattcagcc taagaaaacg ggctaagtga tcaataggtg gtggtggtgg tgggttggtg 240
 ttgttggttat tcccttggtt ctaattctgg actagtaact gcatcaatgt gttctgctgc 300
 tggattaact gagtgagctc cggtggaag gtaaaccgg ggtcacgtct cggaggcatc 360
 tganggttta gaaaagatga gatttaagaa tagagggggc ctaaagagaa aacac 415

<210> 1948
 <211> 396

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-C11
 <400> 1948
 gggtcgacgg gggagtttag tagcatctcc taaagtgatt tcaataaaact tgcgtcccg 60
 acccgaaact aaaagatttc aaaaaccata attcatcccg gaataaaatt tttgtaaaat 120
 catcaacaca ttcaaaccat gagtagggca cctacgtagc attagtttca tcctctcaca 180
 agcttgtgca acatgttcat gatcagggtg tttaaagttc ataatatcgt ttctaagaga 240
 gatgatctta gggggaggaa aatacttaga gataaaagca tctttgcact tgttccatga 300
 atcaatacta tttttaggca aagacgaaaa ccaagtttta gcacgatctc taagtgaaaa 360
 aggaaatagc ttcaatttaa cgatatcatt atcgac 396

<210> 1949
 <211> 416
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-C9
 <400> 1949
 gggtcgaggg ggatccataa tatatgagac tgtaagggtg gttctcttcc agtatgttat 60
 catgggttag attaggacta attttttagta caagagaaga atgctatggt ggtggttgtt 120
 ctcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
 aaaaaaaaaa agggccccctc aaaagggttca aaccttattt tgccataaag gcaaattaaa 300
 aacccttcaa aaggggacccc aaaattaatt taatgggcca tcttttaaaa atgtcgtaat 360
 gggaaaaacc ctgaggtacc caaagtaaac ccccttgaaa aaaatcccct ttttac 416

<210> 1950
 <211> 418
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-D9
 <400> 1950

cgggtcgacc gggaagaaca caaggcggag aagcggggcg cggcgtccaa ggaggccggc 60
 ggcgagggga agcagcgggg caggaagaag ggcagcaagg ccaagaagg cgtggagacg 120
 tacaagatct acatcttcaa ggtgctcaag caggtgcacc ccgacgtggg catctcctcc 180
 aaggccatgt ccatcatgaa ctcttcatc aacgacatct tcgagaagct cgccggcgag 240
 tccgccaagc tggcgaggta caacaagaag cccaccatca cgtcccggga gatccagacc 300
 tccgtccgcc tcgtcctccc cggcgagctc gccaaacag ccgtctccga gggcaccaag 360
 gccgtcacca agttcacctc atcctaagct tcatcgctgt ccttttaacg aatccatg 418

<210> 1951

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E1-E12

<400> 1951

ggtccagaat atccgggtcg acggggcccg tgggtccacga accatttccc aaaatttccc 60
 cactcgcgaa ccctaacttc gaccagcctc tcgccccaga tcccctcccc ctactctcac 120
 caggagcaga acccaccgcg tcggaccgct ccgcgtaatc gccatgtggg gcggacgagg 180
 aaccgcgttg tcccaagaag tatcttgagg agcggtgcaa gccacagtgt gtaaaaccac 240
 tgtatgagta tgagaaatgt atcaagagag tcgaggccga tgatactggg cacaagcact 300
 gcactgggca atattttgac tactggatcat gcatcgataa atgtgtagca ccaaagctct 360
 ttgaaaagct gaaatgatat tggggcgcta ctttcagtga gtgagcctgg tcattggcca 420
 gaactttggt caagttgaaa taatt 445

<210> 1952

<211> 405

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E1-F11

<400> 1952

gggtcgaccg gggggctggg ggcattccagg aaccgcgtgc tatcgctgc atcttggggc 60
 gagcccaggc ccagcctcg cagcgtatct aaaagcagtt tgctcgtgaa gtgaatgcag 120

ccctcccca gctcgaagcc acacgcccgc tcagatgggc ccagtgcgcc atcacgttca 180
actcggcaga tcagctcaag tgcgagccta ccgctggcgc cctcccatgc tttgctcccc 240
aatcatcagc agcgtgcaac ttaccaagac catcatcgac gtgcgaagcg agaacgacaa 300
ggccaaagcc ggcgtgccgc agctcccctc caacgcaaag aacaagatca tcgctctgcc 360
gctcgaagaa cttccgaaca agataaaggg aatggtgccc aatgc 405

<210> 1953
<211> 421
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E1-F9
<400> 1953

gggtcgacgg gtaaaatata aggacaacca aaagcttaag cttggggatg ccccggaagg 60
catccccctc ttogtcttcg tctatcgcta actttacttg gggctatatt tttattcacc 120
acatgatatg tgttttgctt ggagcgtctt gtatgatttg agtctttgct ttttagttta 180
tcacaatcat cctcgctgca cacacctttt gagagagaca cacgtgattc ggaatttggt 240
agaatactct atgtgcttca cttatatctt ttgagctata tagtttttgc tctagtgatt 300
cacttatatc ttttagagca aggtgggtgt tttattttat agaaattatt gatctctcat 360
gcttcactta tattattttg agagtcttaa acaacatggt aatttgcttt aattttgaaa 420
t 421

<210> 1954
<211> 430
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E1-G9
<400> 1954

ggtccagaat acccgggctg aggggatgcc atagtcaacg gcgacggcgg tagccgcgcc 60
actgctggtg ctggtggtag cggcggcggt ggtggtggct gcggtggctg cgttccaccg 120
gaggccaacc gcagaactcg tgtcgcccct taccgcagc cttcgccaag gtgatggacg 180
cgccggtgct cgtgacgtgc acgcaccgct gcgctttag gagagagatc agagcaagaa 240

gagagcaacc agcgtgaaaa aaaacattag caaatcagaa ttgttgctcg atcccccttgt 300
 tgggggtggtt acaacttagt gtttagatca tctttgatga caattgacgc cgtcgatctg 360
 ttttaattgtg ttcctttggc tggttggtgc ttcagtcgca gccagaatt ggcgtggatg 420
 cgcggccgct 430

<210> 1955
 <211> 427
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-H9
 <400> 1955

ggtccagaat tccgggtcga ccgggtacca atctacacac cctaggggtca tgcgtagtag 60
 tactttgctt cgagggctaa tgaactttca caataagtat gtgaattctt tatgactact 120
 atgagtccat ggattatagc cactctcatc tttctgcat ttgctagcct ctccagtacc 180
 gtgcattacc ctttctcacc tcgagagttg gtgcaaactt ctccgatgca tcgaaacccc 240
 atgatatgat atgctctatc acacataagc ctccttatat cttcctcaaa acaaccacca 300
 tacctaccta tcatggtatt tccatagcca ttttgagata tattgccatg caacttccac 360
 cactccgttt ttatgacata cacattcatt gtcattatgc tttgcatgat catatagtgg 420
 acatagt 427

<210> 1956
 <211> 246
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-048-Q1-E2-A1
 <400> 1956

tcccggtcgc acggggcgtg ccaatgtgaa ggtaaagggtg gggtccttgc tggcccggtg 60
 gttccttttg aactggcttg ctggggcctg gaaagagttt caaatccaa aaatgggggt 120
 caacccccca ttggatgac aggtgtctgc tctggacaaa aaaaaaaaaa naaaaaaaaa 180
 aaaaaaaaaa aaanaaaaaa aaaaaaatta aaaaaaaaaa aaaaaaaaaa aaaaaaaag 240

cggccg

246

<210> 1957
<211> 330
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-A12

<400> 1957

atgccccggg cgacggggcga aagtattcgg gtcattggctg actatccacg tccgagtcca 60
ccttcagatc gtggagctgt tgtgctgttt aactgaactt tccttgtaa caaacaacag 120
gtctcttggg actttccctt gtcgtggagt actagtcgaa acttcttact cttccctttc 180
cctttttttt ccaatccaat cctcaatact cacggataac caacctggcc gtagctttag 240
gtgagatgta gcaaaagtac tacttggttt aacacagtat atcagacaaa atagcagatc 300
gcttcttctc gtaacttgcc gcaatgcctg 330

<210> 1958
<211> 428
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-A4

<400> 1958

cgggtcgacg ggggataaaa acatttacag ttggtggaac ggtccttgcc tttttgaaat 60
tctggacaaa atcgaagttc ctttgctgta tcccaaaggc ccagtaaggc tgccaattat 120
tgataaatat aaagatatgg gcacagtcgt aatgggaaaa ttagagaatg ggactatcag 180
agaggggtgat agtttggttg ttatgcaaaa caagacccat gtgaaagtca ctggtataaa 240
cttggatgag aagaaagtac gacgtgctgg acccaatgag aatgtacgtg tcaaagtgtc 300
tggaattgaa gaggaggata tcatggcagg tttcgtactt tcaagtgttg ctaatcctat 360
tggtgctttc actgaattta ctgccagct gcagattcta gagttgcttg ataatgctat 420
tttactg 428

<210> 1959
<211> 374
<212> DNA

<400> 1961

atgcccggt cgacggggga ttgatttct ttcactaacg gagcttataa gatttcctgt 60

tgagttttgt gttgtgaagt tttcaagttt tgggtagaga ttttttggac tatggaataa 120

ggagtggcac gagcataagc ttggtgatgc ccatggaacc ccaagatatt caaggatagc 180

caaaagccta agcttgggga tgccccgggc atccccctctt tcgtcttcgt tcattggtaa 240

ctttacttgg agctatattt ttattcgcca catgatatgt gttttgcttg gagcgctgtg 300

tattatatta gtctttgctt tttagtttac cacaatcatc cttgctgtac acaccttttt 360

agag 364

<210> 1962

<211> 366

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-B6

<400> 1962

gtaccagtcc agaattcccg ggtcgacggg tatcttttat gaagaccgtg ttgttactcc 60

cttagatact gccatcacc tctccaattc aaatggctga taaacaagaa aagtaattga 120

aagtatagat attgtatgat agacaagtca atggatagtg ggggaataaaa gagggcatga 180

aataattcat atttatgttg tctaaccaaa caggatagca tgacacaatt tcacatatat 240

atatgatggc taactaaaca ggatagcatg acacaatttc acattatgat ggctaactaa 300

aaaagatgga aagacatagt tcaaaatatg agactatgta aacaggatga catgatataa 360

ctatat 366

<210> 1963

<211> 354

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-048-Q1-E2-C10

<400> 1963

cgacggggga cgtaatgggc catacgggaa aggatagagg ggccctcaagg agtggccacg 60

cgcaccccaa gggctgggtcc gaattggact aggagggggg ggcgcccccc accttccttc 120

tccccctcttc ctccttcctt ccttctccta ctaggaatag gaaagaggag gggaatccta 180
 cttggactgg ggagtcctan taggattccc cacacctggc gtgccccctt tgggcccggc 240
 acctcttccc tccccctctt tatatactg gccagggggc accccataga cacacaagtt 300
 aatccttagc cgtgtgcggt gcccccttc atagttttcc acctcggtca tate 354

<210> 1964

<211> 450

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-C11

<400> 1964

attcccgggt cgacggggga gtttagtagc atctcctaaa gtgatttcca taaaagtgcc 60
 tcccgcagcc gaatctaaaa gatttctaga agcaaaattc aatccggcat aaaatttttg 120
 tataatcatc cacaaattca aaccatgagt agggcaatta cgtatcatta atttcattct 180
 ctcccaagct tgtgcaacat gttcatgac aggttggtta aagttcataa tatcgtttct 240
 aagagagatg atcttagcgg gaggaaaata cttagagata aaagcatctt tgcacttggt 300
 ccatgaatca atactatctt taggcaaaga cgaaaaccaa gtttttagcac gatctctaag 360
 tgaaaaagga aatagcttca atttaacgat atcattatcg acatcttttt tcttttgcac 420
 atcacataaa tcaatgaagc tattcagatg 450

<210> 1965

<211> 373

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-C12

<400> 1965

ccgggtcgac ggtgtacggc agtgaagaag gggaacacgg gaggaaggag gcggtcacac 60
 cgtaggcgt accatgcgca atcgctcgcc tgtagcactt ccctttgata atccatgcc 120
 agcaagggtc atgcacctgg tgagacatgt tgtagtaccc tgtaattcta caaccacaca 180
 tcctgatttt atgtactact actaggtcaa aaaaaagaa atgggttggg tcatctctta 240
 agaacatctt tgcttggtta gtggatgagg ggactcgatt ttccaagcca aacatcttgt 300

<210> 1968
 <211> 450
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-D10

<400> 1968

atgcccggt cgacggggaa gaggaccatt gttggaatat acaagccaag ttctataatg 60
 aaaatttccc actagtatat gaaagtgaca aaacaagaga ctctatatca tgaagatcat 120
 ggtgctactt tgaagcacia gtgtggaaaa aaggatagta gcattgtccc ttttttattt 180
 ggcctttctt tttttggcct ttttttggcc tttttctttt tttgggacaa tgctctatta 240
 atgatgatca tcacacttct gtttatttac aactcaaaga taacaactcg atactagaac 300
 aagatatgac tctatatgaa tgcctccgac ggtgtaccgg gattgcatg aatcaagagt 360
 gacgtgtatg aaaaattatg aaggatggct tggccacaaa tacgatgtca actacatgat 420
 catgcaaagc aatatgacaa tgatgatgcg 450

<210> 1969
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-D11

<400> 1969

cgggtcgacg gggaagaaga ccaaggcgga gaagcggcg cggcggtcca aggaggccgg 60
 cggcgagggg aagacgaggg gcaggaagaa gggcagcaag gccagaaga gcgtggagac 120
 gtacaagatc tacatcttca aggtgctgaa gcaggtgcac ccggacgtgg gcatctctc 180
 caaggccatg tccatcatga actccttcat caacgacacc acaagcatcc gcatccgcat 240
 cccacctcac atcccatctc cccacacgct cgaaccacca gcagcagcag caccatggc 300
 acccaaggcg gcggagaaga agcccgcgga gaagacgacg gcggggaaga agcccaaggc 360
 ggagaagcgg gcgccggcgt ccaaggaggc cggcggcgag ggggaagacga gggg 414

<210> 1970
 <211> 446
 <212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-048-Q1-E2-D2

<400> 1970

gggtcgacgg ggtccattaa ttctggggccc aatgcatggt agtagctgat tcttaaatca 60

cacatacaga tctcagtgct taaggctggc ttcaatgaaa caaccaccca tgtactccta 120

catggcctct catcgatacc tttaacaaat cgtgttctact acaccactct cattaccgac 180

ataatcattt cgctctagcc catcacccag atgaaccaga cctgacacaa ctctaagcat 240

agcaggcata gcaaggtagg aacaacacat acatatggct caatcaactc ctacacatgc 300

tagtggggtt catctagtta ctgtggcaat gacaggctcat gcanaggaaa tgggttcaac 360

taccgtagca cgcagcagtt tgaatcgctg tgtcttaatg cagtanaaga gagcaggagc 420

gagaacatgg gattgtatcg atatga 446

<210> 1971

<211> 361

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-D5

<400> 1971

aattccccggg tcgacggggg agaagaggaa catcttcaag cagaaggcgc cagaggctga 60

tgctgcgggc agcggctgct gttgatttca ttcacgcacg ctaatccccg gcactctatct 120

atgatctatc tttatctttg tggaggatgg atgaaaacgt ttgttgtttg acgaagtgc 180

atctaagcag ctcgtttgtg tcgttttcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaaaaaaaa aaaaaaaaaa aaaaaaagaa gaacaaaaga ataaaaaata aaaataaaaa 300

taataaaaaa ataaaagatc ataaaaaatt gttttttaaa ttcaattgaa tggaagtagt 360

t 361

<210> 1972

<211> 324

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-D6

<400> 1972

aattccccggg tcgacggggc aagaaacgca caagcgagct gttaccctca gactgcaaga 60
gatcgaagcc actgtaactg tttaaactgt taacatgggc tgttgtgccg gtctatttga 120
tgcttgggaa ctgatatttt tcttaattct tatcggatgg gacttgccag agtttaaggt 180
gaagaatacg aagctgtttc atggaataaa aaagaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa tattaataaaa gataaaaaaa ataaaaataa aaaaaaaaaa aaaaataaat 300
aaaaaaataa tataaaaaaa atta 324

<210> 1973

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-D7

<400> 1973

attccccgggt cgacctctcc gtatgatggg agttcaaccc gaaaggaccg cgaactattc 60
agcaattctt cggcatgacg ctcgaaggga tgtatggatt gttcttttga tcacgaataa 120
agtgtccgga caccaccgag gatgcggggtc taaactgcaa ccgtccagat acccacataa 180
gtaatctacg gccgaacacg ctgtcttttc atttgtccta acatcattct gaaaaaattg 240
ctcttggcca ggactggata agaaaggcga aaatgatcag gtgttcggcc ccccttcctg 300
aaggctcact ggatcccgta ctagccagga tgcttgagct cgtaccttat caagcgccat 360
caggggaaga tagagggagg aataaagaag ctgaaagcgg gcctcgcgca ttactcatcc 420
aaaccagggg aattagcgtc tccg 444

<210> 1974

<211> 428

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-048-Q1-E2-D9

<400> 1974

ccgggtcgac ggggaagaag accaaggcgg agaagcgggc gccggcgtcc aaggaggccg 60

gcggcgaggg gaagcagcgg ggcaggaaga agggcagcaa ggccaagaag ggcgtggaga 120
cgtacaagat ctacatcttc aagtggtcga agcaggtgca ccccgacgtg ggcattctct 180
ccaaggccat gtccatcatg aactccttca tcaacgacat cttcgagaag ctgcgccggcg 240
agtccgcca gctggcgagg tacaacaaga agcccacat cacgtcccgg gagatccaga 300
cctccgtccg cctcgctctc cccggcgagc tcgccaagca cgccgtctcc gagggcacca 360
aggccgtcna caagttcacc tcactctagg cttcacgctc gtcgttttaa cgaatcgatg 420
atgatgtt 428

<210> 1975
<211> 416
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E2-E12
<400> 1975

atgcccggt cgacggggca cgtgggtccac gaaccatttc ccaaaatttc cccactcgcg 60
aaccctaact tcgaccagcc tctcgcccca gatccccctc cctactctc accaggagca 120
gaaccaccc gctcggaccg ctccgcgtaa tcgcatgtg gggcggacga ggaaccggtt 180
gatccaaga agtatcttga ggagcgggtgc aagccacagt gtgtaaaacc actgtatgag 240
tatgagaaat gtatcaagag agtcgaggcc gatgatactg ggcacaagca ctgcactggg 300
caatattttg actactggtc atgcatcgat aaatgtgtag caccaaagct ctttgaaaag 360
ctgaaatgat attggggcgc tactttcagt gagtgagcct ggtcattggc cagaac 416

<210> 1976
<211> 435
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E2-E5
<400> 1976

attcccgggt cgacgggcag cggggcctcc tccagttcgg ctccagcacc tccgagattc 60
ttgagactgc attcaagaag gaaactgtcg gcctagttac gagggagcag tatgttgaga 120
agaggggttaa catacgaact aagattgagg aggaagagaa agagaagctt caaaaattgc 180

aacaagaaga agaagaactg caaatgcaga aaaggaaaaa gaggagagtg aggggagatc 240
cacgcttgtc attctatgat gacattggga acggaagtga cgaggatgag tttgagaacc 300
aagaaactca gaagaaacaa cttggaaagg atccccacagt tgagacaagt tttctacctg 360
acagagatag agatgcagag gaacaagcag agcgagaacg cttgaagatg cagtggctgc 420
gtgagcaaga attga 435

<210> 1977
<211> 446
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-048-Q1-E2-E6
<400> 1977

aattcccggg tcgacgggat tatcaaaaaa cgaagtcgtg tgcaacttga caccactgac 60
gagggatatc atatgcgtat tgcacttagt tagtacaaaa ccatggtgca ttataggtct 120
ttttgagtat tgtgcgacct gttagatttg acggcatcat cctcactaaa attaaatatt 180
ctccttttgc tctgtatttg atttgaatgt acaatataga tagtaaagca agtttgacta 240
gaggaattca ataagcatgg gggttctacg aagattattc atacaccaac atacaaaaca 300
tgacaatcat ttgatttacc aaacaaagtt cttaaagagaa aatgaatata tgaaatatat 360
tgcactttat aatagcatta catggcatcg angagcagac acagctcata tatttacatt 420
tttgcttgca ttattcatgt attgtg 446

<210> 1978
<211> 448
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E2-E7
<400> 1978

attcccgggt cgacgggcgt ggacgagtaa tatcatcgtc tatgaagctc gacttgtggc 60
gaagagtttt tcacaagttc aaggagttga ctacgatgag atcttctcat ccgtagcgat 120
gcttaagtcc gtcggaatca tgttagcatt agctgcattt atgaaatctg gcagatggat 180
gtcaaaacga gtttccttac cagtcttcgt aaggaaaggt tgtatgtgat acaatcaaaa 240

aggtttttgtc aatcctaagg ttgctaaaag gtatgctagc tccagcgatc cttccatgga 300
ctggagtaag catctcggag ttggaatata cactttgata agatgatcaa agattttggg 360
tttatacaaa gtttatgaga aacttgtatt tccaaagaag tgagtgggag caccatagaa 420
ttactgatga gtatatgttg ttgacata 448

<210> 1979
<211> 451
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E2-E8
<400> 1979

cggttcgacg ggatacccc cgcaagtgcg gacggtgaac atgatatacg caaccacat 60
ccccaaaagg gagcgaagc atgctctcaa ggacgtctat gtgttgaggc cagtcgcccc 120
aaagttcaac ccatggctct cctgcccgat cacttttgat cgaagggacc accccactag 180
catccgtcat gatggattcg ccgcattggt cctagacca attatcgacg gatttcacct 240
caccagagtc ctaatggacg gcggcagcag cctgaacctg ctttatcagg atacagtgcg 300
aaaaatgggt atcgatcctc aaggattaaa cccacaaaga caacctttaa aggcgtcata 360
ccaggtgtag aagccagctg tacaggctcg gttacactcg aagtggctct cggattcccg 420
gataatttcc gaagcgaaga gttaatcttc g 451

<210> 1980
<211> 377
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E2-F11
<400> 1980

atgcccgggt cgacggggga gctgagggct tccaggaacc gcgtgctatc gcctgcatct 60
tgggcggagc ccaggcccca gcctcgcagc gtatctaaaa gcagtttgct cgtgaagtga 120
atgcagccct cccaagctc gaagccacac gcccgctcag atggtcccag tgccccatca 180
cgttcaactc ggcagatcag ctcaagtgcg cagctaccgc tggcgccctc ccatgctttg 240
ctccccaatc atcagcagcg tgcaacttac caagaccatc atcgacgtgc gaagcgagaa 300

cgacaaggcc aaagccggcg tgccgcagct cccctccaac gcaaagaaca agatcatcgc 360
tctgccgctc gaagaac 377

<210> 1981
<211> 425
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-F5

<400> 1981

attcccgggt cgacggggcg cggcgagcgc cggcggcggc ggggaaggaca aggacaggga 60
cagggacagg gccaggggct ccgcggtctc cttcacggag ggcgagaagg tgctcgccta 120
ccacggccccg ctctctctacg aggccaaggt tcaaaaaact gaaaatcggg aggacgagtg 180
gcggtatttc gtccattatc ttggatggaa taaaaattgg gatgaatggg tcgcaagtga 240
tcgtttattg aagttgactg aagagaatgt tcgaaaacaa ctagagctga aaaaccagtc 300
aggggacaag accgtcagga ctggtggacg gtcagcacag cataacccaa aaggctctaa 360
tgtggatgca aaagccgata aagatgacac caaaggctct gtcaagggga agaagcgcaa 420
gaatc 425

<210> 1982
<211> 444
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-F6

<400> 1982

attcccgggt cgacgggtca cctaacgcct tgcttctaga tactgacctt gtaactctag 60
ataccctacc tggcgtgtat ataagacaaa ggttttatcc tgtagggggg acatcaatgc 120
aacatcattc accttgcct agagtttgac cacatctcac gatctggagg tagatcaact 180
ctatactcga tacattccat taatataaac gagagaagga tgtaggggtt tacctocatc 240
aagagggccc gaacctgggt ataacaccgt ctctttgttc ttgtcaccat ccggctgaga 300
tccatagcac ggtcagcccc ctgcgggctt tcatgttttg tccagtccat gcatctataa 360
cttaaaagat atggttctag tccatgatt aatcatgtta gattggcact agtggcaagt 420

atacagtttt gttatcaatg atgc

444

<210> 1983
<211> 437
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-F7

<400> 1983

attcccgggt cgacctgtca tcgcaagttc aacatgtggg tgccatggag agcatcagcg 60
tgacgatggc ggaggacgga gctttgcacg agcctgacca cgacctctcc gacgtgtcga 120
tgagcagggg tttctcacag ctgatcaaag ccgaggggag gtgaaaacgc gccggatgat 180
gtgtagggta ccggtagagg tgtgagcaag ccttgattt ttcttttctt gttgaagttt 240
acctgagatg tgtcacgtgt aattgggtgt ttcattccctt gtaattgtac tgaactacgg 300
tttgatttct tgatggcctt acctcaccca cttctggggg cacacgattt atcagatata 360
ggatatcttct tgtaaaaaaa aaaaaaaaaa aaaaagaata aatgggaaaa aatgaaaaaa 420
aaaaaagcgg ccgctct 437

<210> 1984
<211> 359
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-F9

<400> 1984

gggtcgacgg gtaaaataca aggacaacca aaagcttaag cttggggatg ccccggaagg 60
catccctctt ttcgtcttcg tctatcggtg actttacttg gggctatatt tttattcacc 120
acatgatatg tgttttgctt ggagcgtctt gtatgatttg agtctttgct ttttagttta 180
tcacaatcat cctcgctgca cacacctttt gagagagaca cacgtgattc ggaatttggt 240
agaatactct atgtgcttca cttatatctt ttgagctata tagtttttgc tctagtgtat 300
cacttatatc ttttagagca aggtgggtggg tttattttat agaaattatt gatctctca 359

<210> 1985
<211> 449

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-048-Q1-E2-G11

 <400> 1985

 atgcccgggt cgacgggtat cttaaagtga ccaggcgggtg gggctctggg ctttcttgct 60
 atagtgtgctg ggtgagctgg gatggcccg accgcttttc ccccttcac tcgaatcac 120
 tccaaatcct ggataaatca aaccacaaaa gaatgtatag catggggact ttggaatata 180
 ccctcatgta tggcctttct cttagccgcc cagattgccc atagcgtgac ggatagcttg 240
 atgaacagct catgagataa tgactgcata tgtgtaaata accattgttt cgcattgggt 300
 tctgagggtg ctgcgatttg ctgtccaagc tcttcatcaa ccagcgccca tgtacacctc 360
 gacatgggtgc aatctactag agagtgttc catgagtcgg gcgccccaca tattccacat 420
 gcacttgagt caaacatgtg cctgtgtga 449

<210> 1986
 <211> 438
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-048-Q1-E2-G3

 <400> 1986

 cgggaaccag ctaatgtatg taagacgtct gagctggaga gataatttaa aaggatcac 60
 tgatgattac ttgcattcgc cacatattga gtcaacagac tcaaatgat aatgacaagg 120
 aatgttaata agatttctat acttatggga ttattcataa tgaaagaaaa caagaaattc 180
 cagagcaata ggttgctgag gatTTTTTgga atatcgggtg gtatttcaaa gacttttgtg 240
 taacacataa acaactgggg gatgagcgga tattctataa atgcgagaat taaccgtagg 300
 ggtattcaag tgacaagaac agcaaggcag taagctcaag ggattatcga aaccacgacg 360
 agtttttcag ggtatcttgt aataacaaga ccaactgggg atgatataag aataacaact 420
 gtaagtagtt atccatac 438

<210> 1987
 <211> 449
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-048-Q1-E2-G7

<400> 1987

attccccgggt cgacgatgtc aggggtgcagc gatacgtcgc cgctgggtgac ggcaagctct 60
gtctccatgt ccgcgcctgt ctccgggtgtc tcagcagccc cagcgtcgcc actccctccg 120
atggggcgct ttggcgccat cctcatacac tgacggcttc gaggactgag agcggcattg 180
aggatgcaag cagacagaga ggattgtgtg tgtgtgtgtg ccgaggatgg ggggtgcggc 240
cgcttgggca cgccattaat atggagtagt gggagagagg cgggtcgcgg tcaaaccgct 300
ggctcgcttc ccagtgagcc tgtgcaccgg actgctggca cgctaccat cgtttcacac 360
agctactcgc acgcctcccg atgacactgt gcagcgagca tgctcncat caattcacac 420
acctgcacgc atgcctcctg gtctgctg 449

<210> 1988
<211> 417
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-G9

<400> 1988

gggtcgacgg gataccatag tcaacggcga cggcggtagc cgcgccactg ctggtgctgg 60
tggtagcggc ggcggtggtg gtggctgcgg tggtcgcgtt ccaccggagg ccaaccgcag 120
aactcgtgtc gccccttacc cgcagccttc gcgaagggtga tggacgcgcc ggtgctcgtg 180
acgtgcacgc accgctgcgc ttgtaggaga gagatcagag caagaagaga gcaaccagcg 240
tgaaaaaaaa cattagcaaa tcagaattgt tgctcgatcc ccttggtggg gtggttacia 300
cttagtgttt agatcatctt tgatgacaat tgacgccgtc gatctgttta attgtgttcc 360
tttggtcggg ttgtgcttca gtcgcagcca agattggcgt ggatgccccg gcgctct 417

<210> 1989
<211> 413
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-H2

<400> 1989

aattccccggg tcgacaagaa aaaatccagc gagaacatca aggtcatcta cgcccgcgcc 60
aagcagtacg ccgaggagta cgatgccag gacaaggagt tggttcagct taagcgtgag 120
gcccggatga aggggtgggtt ttatgtcagt cctgaggcca agctgctgtt tgttgtcaga 180
atcagaggta tcaatgccat gcacccaaag accaagaaga tcttgcagct gttgcgtttg 240
aggcagatat tcaatggagt gttcctgaag gttaacaagg ccaccatcaa catgctccgc 300
agggtcgagc catatgttgc atatgggtac ccgaacctga agagtgtgag ggagttgatc 360
tacaagagag gttatggcaa gctcaacaag caaaggattc ctctgaccaa caa 413

<210> 1990

<211> 463

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-H3

<400> 1990

gtgacgggcc taaattaccg ggtcgacggg attacatcat gtagttgatt actatattgt 60
ttatttggtg gaagattata tgttcagatc cgatatgcta tttaatacac ctctaatttt 120
gagcatgatt atcatttgtg ggtagttact ttagttcttg aggtcatggg agaaatcatg 180
ttgcaagtaa tcatgtgaac ttgatatgtg ttcgatattt tgatagtatg tatgttgtga 240
ttcccgtagt ggtgtcatgt gaacatcgac tacatgaaac ttcaccatat ttgggcctaa 300
gggaatgcat tgtggagtag caattagatg atgggttgcg agagtgcag aagcttaaac 360
ccgagtttat gcgctattcc gtaagggacc gattgtatcc aaaagtttaa tgctatgggt 420
agaatttatt cttaatactt ttctcatagt tgccgatgct tgc 463

<210> 1991

<211> 469

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-H5

<400> 1991

ggtaccagtc cagaattccc gggtcgacaa aactgagaaa gctgaagctg tacagccatc 60

atcaggtgaa caagttgaga ctgtcaagaa aacatgccaa gctgaacctg taaagcaatc 120
atcaggtgca caagttgaga ctgtccagca agcatgccaa cctgaagctg acgctgttaa 180
gaaagcagaa aaattgctgc tgagctaact gggccatctg acccaattgc aacagctgat 240
gtagctgagc aaacaatgga aaatcaagct ccaaaagatg cagttgaaat tccttgtgat 300
gtgaagctgg aggatgaagc attgactgaa gaatctgtag atcaagttgt aactgagcaa 360
gtcaaagttc catcagatgc tgtacctgac acttcaaaaag ttcaaccaga aacaccagtc 420
gaacacgtgg gaacagaagc agaagcggac actgctcaag acctaactg 469

<210> 1992
<211> 467
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-H7

<400> 1992

gtaccagtcc agaattcccg ggtcgacggg ttctcttgat tacaagaatt tgatttacat 60
atcattgata gaaaaggagc tgagaacccc gtagctgata atttatctag gcttgaaaat 120
gtgctgatg acccactacc tattgatgat agttttcctg atgagcagtt agctgcaata 180
aatgttgctc atagtactcc ttggtatgct aactatgcta attacattgt tgctaaacat 240
ttaccaccta gctttacata ccaacaaaag aaaaaattct tctataattt aagacattac 300
ttttgggatg acccacatct ttataaagaa ggaatagatg gtattatttg acgttgtgta 360
cttgagcatg aacagggaca aatcctacgg aaatttcact ccgaagctta tggagggcat 420
catgctggag atagaactgt tcacaaggta ttgcaatctg gattttta 467

<210> 1993
<211> 343
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-A1

<400> 1993

gggtcgacgg ggaagaagac atatgtgcaa cagctagaaa gcagcaagct gaagcttgca 60
caactagagc aggagctcca gaaagctcgc cagcaggga tcttcatttc tagctccgga 120

gaccaaacc atgcatgag tggaaatgga gcaatgactt tcgatctaga atacactaga 180
 tggcttgagg accaaaacaa gcaaatcaac gagttgagga ctgccgttaa tgctcatgca 240
 agtggcagtg acctgcgcct tatcgtagat gggataatgg cacattatga tgaaatattt 300
 aagggtcaaag gtgtcgctgc caaggctgat gtgttccata tac 343

<210> 1994
 <211> 374
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-A10
 <400> 1994

gtaccggatt tacaattcgc gggtcgacgg ggcagcggac ggcgttgagc gggccggcga 60
 ttccgggggc gcgggcgcgc gcagaggggt tggtagatg cggtggcgcg agggggctgt 120
 cgggggtggtg ttggagagtg ttggtggcag ctatcgtgag cgcaacaagc tcgagaacct 180
 ccggttatct ccccgctgc cggcgatgcg gacgagctcg ttgacaaagc tggagcatac 240
 atacgaggat ggaacattgt caaaacgatg ggccacggcg agggcaagcg atttggtgaa 300
 agaagaagtc gcggagggct cagcgggtgaa gaaaaaatga tggatgaactg cgaatggcca 360
 cagatggcaa cact 374

<210> 1995
 <211> 351
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-049-Q1-E1-A11
 <400> 1995

aattcgcggg tcgacgggag gaccgggcta gcccccttct gtaagaccaa cccagcccca 60
 ggggtaagcc gctgatctga acatcttctc ttcttctgta gacacccttc acctgaatct 120
 ttaagaaatc atcattgtat ttttcaggct gatgacaaat tctggaaggt caaatatgac 180
 catgaggtgg ccaagaaggc caggaaggct aagaaagccg ccaagagagc cgctccccgc 240
 aagaaaggaa gtangcctac tgcttcagag ctgctgcaac taagcgacag ctccgattca 300
 gaggttaacc cccaaaaaaa aaaaaggaca acaaaaaaaa aaaccggccg c 351

<210> 1996
 <211> 462
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-049-Q1-E1-B10

 <400> 1996

taccggtcaa gaattcccgg gtcgacgggt ccaagaaaga atgtagaaat gaagttatcc 60
 atccacacaa tgtttatatt atcagtttgt cacaatccat atgaatccaa acaccttatc 120
 tttagatgat aggtcgtttt ggttgttttt ttggctgtta gttcatatct tggcacgccg 180
 tgcctgggag tgttccttgt ctgtaataag tccatatgga atcgttgacc tgggggatgg 240
 ttctaacact tgcaatatct aaagagtatc tctgtaaact ctgcaagtct gatgcatgat 300
 cagcagataa tcatagtttg tagtttacag gcaaactgcg attctaggaa gtgatacgaa 360
 cataaatgac gcatgcatgc gagaatcaat gctactcatg agctacacac catttagcag 420
 catcatgctt atcgtgctac taatgcaacc tatgttttga ac 462

<210> 1997
 <211> 460
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-049-Q1-E1-B12

 <400> 1997

ggtaccgatac cagaattccc gggtcgacgg gaaagatcat aagtgtact tatgaattaa 60
 gtgccaaaga tggcactact tagatctatc ctcgctttta tgccatagcta ggggcattaa 120
 acggtagcgc tagttgggag gcaacccaat tttatttgtg ttttttgttt ttgtttctgt 180
 ttagtaataa attttgtatc taccttctgc ttagatgtgt ttccatgttt tatttagtgt 240
 ttgtgccaaag tagaacctat aggataacct atggtgatag ttaatttgat tctgctgaaa 300
 aacagaaact ttgtgtcac gaaaaaaatt caataaatca cagaaacatg attttgcatt 360
 gattcatttt gctgtagatt aatagaaaca ttttacagga cgtcctatct ttggtaggatt 420
 tttagagttc cataagtgtt cgaaagttac ggattgctac 460

<210> 1998
 <211> 376
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-049-Q1-E1-B6

<400> 1998

attcgcggggt cgacggggcaa gctcacacca atgagggttag caagggcaaa ccactagatt 60
 gggtttcagg acaaccagtc acagatgagc atggacgcct tcagattata aagaatgatg 120
 acctcgaaga gtcccaagaa ctcggttctg gaacttttgg aactgtatat catgggaaat 180
 ggaggggctc tgatgttgca ataaaaagaa tcaatgacag atgttttgct gggaagccat 240
 ctgagcaaga aaaaatgcgg aatgacttct ggaatgaagc atctaacctt gctgatctgc 300
 accaccccaa tgttgtggcc ttttatggcg ttgttctaga tgggcctgng ggatccattg 360
 caacggttac agaata 376

<210> 1999
 <211> 393
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-B8

<400> 1999

attcgcggggt cgacgggcct caggagattg gtttagcgat tgctaaggcg caacatcgtg 60
 cacgtttgta gtcggattgt caaagtcgtc tccaccaa at cgatagttat catctcatcg 120
 aaagatcggg acaccctcgc ctctatcaag tggatcagt tttcaggttg ctcggtgaga 180
 atttccagtt ttctagatt agatttattt tcttacctat tgtccaagaa aaagccacaa 240
 aaaagagtta gatctattca tccttggtcc aagccagtct gagcctttgc aattttcttt 300
 tcattgcttg catagttgaa ttatcggttg catcgctcgtg taagttgctg gtcttagcgt 360
 ctagttcctt tagagtttcg agttctgttc aca 393

<210> 2000
 <211> 444
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-049-Q1-E1-C10

<400> 2000

gtaccggtcc agaattcccg ggtcgacggg ccatccaata tatggtttct gtttgccgat 60
caaagtatgt acgtgttccc ttctgctcac aagatgattc tggcctgtct ccaaacaatca 120
cagaaaggta attgtgttgg taagctgatg atgcgcatgc gaggacgtgc gtattgtaca 180
acttgatgta ccaatacatt ggtagggtag gacggccttt gccatgtcgg gtgcgctcgc 240
ttggcaggcc acaagacaat aaaaagtata tttggtggtg tttgcggggg ggagatcgca 300
cggaacaat ctatttgttc tattttgccc gggttctcca ccttgccatg gtgtctctgt 360
ccttctcctg tgttgttgat tccaccgat catctgaagt acaccgcat cctacatagc 420
taatattgta acaagcctgn gcgc 444

<210> 2001

<211> 462

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-049-Q1-E1-C12

<400> 2001

aggtaccggt ccagaattcc cgggtcgacg cctgccctca gcttgatgcc atcaagagcc 60
cggctctgcag cgaaggtgcg cagctggcct tcgctcgtgt caaagttcag tgggcgaaga 120
tggacgctgt caagctcgcg accgaaggac cgcccgcggg caaggagcac cgcacgcccg 180
agcagtatgt tgatgatgtc ctgaagggat cccgcattgt agagggccag tgtgcaaaag 240
acattatgtt tgaatgaaga cgttcatgtt atcccgctct gtattatgaa acaaagctga 300
tttgtaatat aatgcttggt gtttgtttta gtttttgcct cctgtgcggc cattttatta 360
agtctgaaag ttggccactc gccggcttca gcctccacgt aggtagtacg gnggtgttcg 420
ggttggaacc tanacactcc ttgaccaaga gtttggtcct tg 462

<210> 2002

<211> 412

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-049-Q1-E1-C6

<400> 2002

gtcgacgggc gacagtgaga ggcgccaca tcaacctcaa ggtcaagggg caggatggca 60
 atgaggtttt cttccgcata aagagatcca cacagctgaa gaagctgatg aacgcttact 120
 gcgaccgtca gtctgtggat ctcaactcca ttgctttcct ttttgatggg cgtaggctcc 180
 gtggtgagca gacccctgat gagcttgaga tggaggaagg cgacgagatc gacgccatgc 240
 ttcaccagac cggaggggtgc tttcctggcc cttagaagga gcttgctgca gcctggctgt 300
 tctatgtcgt atgctacctt tagaactaga gtaaaatgta agaagtgaag gaacttgtga 360
 ggctatgggt ctgtgccata gcctganggg gggctctggag gtgaaacaac at 412

<210> 2003
 <211> 388
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-C8

<400> 2003

attcgcgggg cgacggggag gagatgggtga tggccgtcag ggtcgccatc gtgtgcctct 60
 cggagctgcc cgccgatcgg ccatccagcg atgaactcgt cgcgatgctt gccagctcc 120
 acagcttcta gccacctcca tcatcgttct agcagaaagt ttcttcagaa catcttccat 180
 cgcgccagac gacgccgaat ggagctggat cggaccccgg ccggccatac agtcccacca 240
 tttcagcttc ttgagctgaa ttcagtttgt ccagatggga accagcaatg tagaggccga 300
 acaacaagtg tggcaaaata gcttcatggc acatgctggt ggttgagggt catgtaagat 360
 gatgatgggt atgttctggc catgaatg 388

<210> 2004
 <211> 390
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-D10

<400> 2004

ggtaccgatc tagaattccc gggtcgacgg gcattgggac gttcaaggag cagttgatgt 60

ggacattgga gccaatccct ctgctgaggg tgggtggtgat gatgaggggtg tcgatgacca 120
ggccgtgaag gtggttgaca ttgttgacac ctcccgctctt caggagcaac ctgcttttga 180
caagaagcag tttatctctc acatgaagcg ctacatcaag aacctctctg ccaagcttga 240
aggggatgat ctagatgttt tcaagaagaa tgttgagtct gccacaaagt atcttcttag 300
caagctcaag gaccttcagt tctttgttgg cgagagcatg catgatgatg gccgcgtggg 360
gtccgcctac tacaagagg gaccggctga 390

<210> 2005
<211> 292
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-049-Q1-E1-D11
<400> 2005

ggtaccggac cagaattcnc gggtcgacgg ggtacttcaa gatgaagaat ttgtgctgga 60
ggcacacaac tatgagatgg aaccattgct tgtaccgga gggatatgtgt ttgtgctggg 120
agacaaccgt aacaacagct tggactccca taactggggg ccgctcccg tgaggaacat 180
acttgggaga tctgtgttcc ggtactggcc accgtctaag ataaccgata caagatacta 240
ccaaccgac gcggcactct acgcggtggg gatgtcgtga cgactcgtgc ct 292

<210> 2006
<211> 446
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-049-Q1-E1-D12
<400> 2006

ggtaccgatc cagaattccc gggtcgacgg gggcacaaaa gctggctgat tttgcgttgg 60
accgggactt tgaagttagc ttctcaacct atgacagagt cctggaagcc ctgtacactg 120
aggagaagac gttgccagcc tactccatgc tctgcaagat caagcacaaa gggggcattg 180
tagaccagaa gggttgcgat gctttgatgg gtagcttaaa agctggagga tactcaaagc 240
aagctgacat tttgtctagg atcttgggtg agaattggatc gtcaacatcc aagaggggca 300

agaagtctgc catgggtgca tagggaggtt tctgggttta tgaaatggtc ctattttcct 360
 ttctgaattg aagaaacagt ggtttgtttt gttttattaa tgcttggttg gccatctgtc 420
 agattgggat tttcatccta gaagac 446

<210> 2007
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-D7
 <400> 2007

gtaccggacc agaattcgcc ggtcgacggg gaccctaaaa agaaatcctc tttcccattc 60
 acgctttcac actcactcat cttgctcttg ctcttcccct tgctttatcc cttttccac 120
 tccaaaattg ctgccgccgg tagctcccat cagcttgatt ccttgattca gtgccttgag 180
 cttgctcgtc ctcacctaca gccagccccg cagcttgatt catttggtgc gccatagcgt 240
 gaccttcgac ggcggctggt ttgtctcttg atctcctcgt acgcctcctc ggtctcctcc 300
 taggctggta aacgtcgatg gagtggtagg agggcccaag gtgcagctgc tcaagggagg 360
 aggcgagatc atcaatctgc acgatgttgt tgctgtcaat gt 402

<210> 2008
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-D9
 <400> 2008

taccgatcca gaattcccgg gtgcgacggga agtgcgacta ggacgagtgg gcgtggatcg 60
 ttagttcatc ggaagtagta ctagttttct tcaactgtaca ttaaataaag agttttgttt 120
 cgtacttaca caatttaaaa tgattgttat ggagagaacg agaaaaccac tccactatat 180
 attagtcgta tacacgagag tactatatgg acacagcttc attgacttag tgcacctgcc 240
 tttggattta tgacaggtgg gccc aaaatg tggctggctc acctgtcata cagccaaaag 300
 caggtgcagt gaaggcaccg gagcttagtc cgtactacag tagtacatat ataagcggga 360
 gcctcagcac ttgttcctta aggttttgtc 390

<210> 2009
 <211> 365
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-E1

<400> 2009

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gggtcgacgg gtcattacaa acatatacta cctccttaac caataaacca tgcattattaa 60
tggatgatta gttcgcaggg gcagccatgt tctcgcgcct cgtctgattc atgcacacag 120
gggactgatc acaagccaac tgattccatt aatttgcctgg ctgcgtcctaa atcagaaaat 180
aaaataaaaa aatagcactc caatacattg tggagttcaa ctgcgtcgagg ccagggtgcc 240
gcttctccca taatacgcag ggcaccccat cgatccattt tttagagctt gtgaatcatc 300
tgagcttata taatagtagc tgaatgaaga agcatcatgc atatgcattc aacgtaccgg 360
cagct 365
  
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<210> 2010
 <211> 395
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-E11

<400> 2010

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aggtaccgat ccagaattcc cgggtcgacc ttgaacttga tttcatgccc atggaaacga 60
tgtagatctt atcattaaag cttctcttac attaattatt cccttggtat aagttcatct 120
catatctggg atctggcctt gtcgcaatcg tggttccgac cacatcttct ccttgattcc 180
atctctcaga caagttgaaa tacttgctct ctgttgatcg atacatctcc gcaacctcta 240
ttttgatatt ccttcgagta ttgccctccg gtatctcgag aatatcgaag aactgtgttg 300
cttcccatga gtcttcatct agtattgctt ctcaacgttt tcaaattccc ccaagttttg 360
agttaatagt cactccagaa caccgataag tgaat 395
  
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<210> 2011
 <211> 411
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-E5

<400> 2011

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tgggcgctag gtaagttcca ggtgagtctc tgctttttcc ctttttcttt ctcttttcta 120
attctgacat ttgtttctgg acttagtaaa aatggctagg cactttcaaa aatcatgcaa 180
ctaactgagg tcaactgtttg gaatatttcc aacagtaaac atttcagttt gtgattattt 240
ggacatttaa aatattttat aacattcaaa tgcccaaagc caaatggagt atgatttaat 300
ttagagccca aatatgtcat gaaaaaatgc gcatcacctc tggttactgt ttccagcatt 360
ttccaaaaat gatgaacatt tttgaaagcc atttggattt actgaaaata t 411

<210> 2012

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-E6

<400> 2012

ccgccggtac cggacaagaa ttcgcgcggt cgacgggagg gcaaacggag atcgttgaaa 60
gatcttgctg ctcaagaact ttgtgttaag atacaacagc aggagcactg cccgattgag 120
gatgctcgcg cagcaatgtt catttacaag aagcacaaga aaggttggga gaagaacaag 180
aaagagcaat tcaggttcaa gaacaagcag aagaagcgag gtaataagaa atctgccgaa 240
gccaatgaga aggaccccaa tgtcccaata gttctactgt aggaaatata gatgtagggg 300
agctagggcc aagcagtgtc gttcttaaca tggatttcac gacgccaaag ggtatgccgt 360
cgtgtgggaa tttcagatgg accctgtcaa gaactcaaga tcagcacgcc aacctggaaa 420

<210> 2013

<211> 465

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-049-Q1-E1-E9

<400> 2013

ggtaccggtc cagaattccc gggtcgacgg gactcttgat cccatatttg ggttcatcta 60

gggaggcgct caacacaacg aacaaggcaa ccggacttat aatccttgaa cactctcact 120
 tagccataga attctataat tttaaatttc ggcgaagccc ctagtctttg gaaggccgaa 180
 tttggggcgc tatccacgcc tgggcccggac aaagtccggct cccactcta agcggcataa 240
 gtctttaagg actcgcaaaa aacctctcga acagcgaaca gctctcgct catcatgacg 300
 gtcagtttta gctttctcaa ccgaggcgct cggccagctc aaccggggcg caatcccagt 360
 tggttctccc ggtgcaacct taccgatac aacggaacgt aaggtaacan aacatgggag 420
 ccgggcaaac ccaactattg acccaagaca tgattcagag acgat 465

<210> 2014
 <211> 443
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-F10
 <400> 2014

attcgcggt cgacgggttc actgatattt gggttttgtt tggccaactt gatctattta 60
 tcttgcaatg ggaaggggtt ctttgtagtg ggttcaatct tacgggtgctt gatcctagtg 120
 acagaaggga aaccgacacg tatgtatcgt tgctactaag gataaaaoga tgggatctat 180
 ctctacatat atagatcttg tctacatcat gtcattgttc ttattgcatt actccatttc 240
 tccatgaact tattacatta gatgcatggt gtattgtagt tgaacttgaa agacaatttg 300
 ttcatatgca tccttctata caaaggatct ttctagagtt ttctaattatt gagcattctt 360
 ttgttaagcg tgcttccact atatttctag ctcatgagtt tagatttatt atgaaagaag 420
 ctagtgaaac ttttgacat tat 443

<210> 2015
 <211> 452
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-049-Q1-E1-F11
 <400> 2015

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gaagagatga agaggcaagg ggagaatgga aaggaccccc ggtcttattt ataaggacaa 120
 agggataaat gacaagcgcg agaatcgagg agccaaaaat cgaatatctg atacaggtgt 180
 cgccttggtc ttcggttaatt aattaataaa agaagtattt ataggttttt tatacagaga 240
 tgatgtcatg acgatttgct gcaatttttag aagatgacgt catggcggtt taccaagctc 300
 atatggaaga gacgtcatgg tggtttaaaa gggttaaaag aagatgttca aggaaatttt 360
 ccaagtaatg aagattgaca tgaacagggt caaatcaatc tggggcctaa tgttggggat 420
 antactacta agtttaaacc gccaggaggg gc 452

<210> 2016
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-F5

<400> 2016

attcgcgggt cgacggggca tcccatcttt cgtcttcgtt catcggtaac tttacttga 60
 gctatatttt tattcaccac atgatacgtg ttttgcttgg agagtcattt tattttgtta 120
 gtttttgctt tctgttagtt agaatagtgt ttttcttctt tagtttcaat aaaaagtcaa 180
 ggatagcctt tgccatgctt attttgctag ttcgaatgtt gctgttgaaa acagaaagtt 240
 taccgctgtt gcaacattcc ctagaaaagt cagagcatgg tctaacgttg aatctttttg 300
 cataatgagc tctggtaaat ttattacagt ggtaatttta gttcataatt tttggagtca 360
 gggaagtatt gatactcttg cattctttac agactgtatt gttttgacag attgctgtt 419

<210> 2017
 <211> 454
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-049-Q1-E1-F6

<400> 2017

aattccgggt cgacgggcac ggacggagga cagagcacct ctcttcttcc aggttcttct 60
 ccttatcttc acttaatgta tgtgcatgtg ctgcagctca cccatggtct tgtttgtctt 120
 gcaagttagt gacgagcttc aggaggagct caagcacgac caccaagagg caccaccgca 180

gcaacagggc gactgtggaa ggcatgttgt atttctgtca gcccagtcct gactatgtct 240
gtccgtgagt ccgacatttg attgctgttg aagcagctcc atgctgaaga agagaacact 300
tgtagagctt gtaacattac ttggagagct tgtaaagtac tgtagagctt gtaaagcatt 360
gtatatgtta tagcttgtat tacgtgtcat tcgtanagct tgtagtgaat ctggctaattg 420
gtaattggat aaaccaggtg ggttctcgct tccc 454

<210> 2018
<211> 377
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-F7

<400> 2018
attcgcgggt cgaccgccc ataccaatac gtacgtacaa tggggtaggt gcggatggag 60
gtggaggtgg agatcacgag catccatgat gctctagcga ccggagccag gcgagcggta 120
tcgtccgcgg tcgcgacgac gaccgcgcg tcgctggatc caaggacgga gtcattgtgc 180
ctacaggcgg cgcggcaacc tccaagggtg gaaaggcgac ctccaagaca cccccgctag 240
cgcattgcac acggtcctcc caggctcatgc acgacgagca acgcccgaac gctgggtgact 300
ccgagcgtcc ccacggaaag agccctcacc atcaatctcg agatgcgcag gccggcatgc 360
actccaagat gatgggtg 377

<210> 2019
<211> 396
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-F9

<400> 2019
ggtagcggtc cagaattccc gggctgactt atggatttaa ccatatcccc atgatgccta 60
ctgagatggg ctctccaaat tccgttcatt ctgacactgc aagctctcat caacaagcta 120
tactgcatca aatgccttca ccccatggaa tggctcagta ccaagtgagg caaactaatc 180
ccaataatcc gcttgaaggc gaaggtagtt taagtggcaa ttctaggcat cgggggggatg 240
gacaagtgct ccgtgataaa gttgcctcaa ttgcaactgg cgggtgttga aactaaaatg 300

gcaatgttga aaaggataat ggattcacta cggttgaacc caaccaagcc cggctatccc 360
gaacaaagga tttatgccaa aattgggttaa cccaaa 396

<210> 2020
<211> 442
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-049-Q1-E1-G11

<400> 2020

taccgatcaa gaattcgcggt gccgacgggt tgatcaaaaaa cccacaattc atcggatctt 60
gacaaacaca tcgcaaaaag aattacatcg aatagatctc caagagaatc aaggagaact 120
ttgtattgag atccaaagag agagaagaag ccatctagct aataactatg gacccgaagg 180
tctgaggtaa actactcaca catcatagga gaggctatgg tgttgatgta gaagccctcc 240
gtgatcgaat cccctccgg tagatcgccg aaaaaggccc caagatggga tctcgcgggc 300
acagaaagtt gcggcggtgg aaaagtgggt tcgtggctcc cctggatggt ttcaaggtat 360
gagagtatat ataggcgaaa gaagtaggta ggttgagcca cgagggggcca cganggcngn 420
ggcatgccta ccccatggg cg 442

<210> 2021
<211> 409
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-G6

<400> 2021

attcgcggt cgacgggagg ggctgcgcc cctctagggt ttccaccccc aagggtggc 60
ggccagccct acatcccatc taggggggcg accaaggga ggagaggggg gcgccactag 120
ggtgggcctt aaggcccatc tggacctagg gtttgcccc tccactctc ccatgcgcct 180
tgggccttgg tggggggcgc accagcccac cgggggctgg tcccctcca cacttggccc 240
acgcagcctt ctggggctgg tgcgccact tgggtggacc cggggaccct cccggtggtc 300
caggtacatt accgatatca cccgaaactt ttccggtgac caaaacatga cttcccatat 360

ataaatcttt acctccggac cattccggaa ctctctgtga cgtccggga

409

<210> 2022

<211> 348

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-G7

<400> 2022

attcgcggt cgacggggac tctaagcaaa ggcagggtac aggggtggtgt caagggatcc 60

tgggtgggtc acctgggttg ggaggaggag gcggtgtctc atgataaaag acttgccggt 120

tcatgatgct cagatccaac agcaatgaca tgcttgctct agtaggtccc cgtatatata 180

tgtcccctgc taattccttg cgtctggtgt aactatgaca ttttttttgg ggggtttaat 240

cattgtgtag catgaattgg tgctggacta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300

aaaaaaaaaa aggtataaaa gttaaacaca acaataaaaa caaaacat 348

<210> 2023

<211> 419

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-G8

<400> 2023

attcgcggt cgacgggaac aggaaggtgc gagcggcgct gagggaggct gagaggaagg 60

tgctggaggc caggaagaag aaggacgctg ctccggaaac caatgaggct tacttggttg 120

ggtttgcgat gcccaatgac ccagctgagc agctcaagca caggggatac catatggttg 180

caggtgcagt ggacattggg ttgttcggga aggcggcatt ggaggatgtc aagcggttca 240

aggaggcgctc aatggagatt ggtgaagcag agggcgagga ggaggatgag aaggaagatg 300

gatactggag tgaatgagca ctgggggaact ggtgatggct tcatttggtt gtgttctgaa 360

ttgaagcttt tagggtctcc attttctgga ctttggtgta ctcttggtta gtcgatgat 419

<210> 2024

<211> 462

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-049-Q1-E1-G9

<400> 2024

ggtaccgata cagaattcgc gggtcgacgg ggctctccat ggcgtccacc ttcgttggca 60
actcgacctc catccaggag atgttccgga gggtagcgga gcagttcact gccatgttca 120
ggaggaaggc tttcttgcat tggtagactg gtgaaggcat ggacgagatg gagttcaccg 180
aggcggagag caacatgaac gacctcgtct cggagtacca gcagtaccag gatgccactg 240
ctgacgagga gggcgagtac gaggatgagg atcaggagcc tgaggaggac atgtaagggtg 300
ggatgtccat gtcgtgcttt gctgggtggg gggtctgggg gcagagtttg atctgtntgg 360
tgctttgtta taaatctgtt tatcatcgca actaccgctt gtacgccanc gccattcctc 420
ctgctttcct aagctctgta tttcctatgt tatggcacct tt 462

<210> 2025
<211> 405
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-049-Q1-E1-H1

<400> 2025

cggtcgtaaa tcncgggtcg acgggggatgg tcaggctggc atgaagcaag gggatctaata 60
catttggtat gttgagcagc agaatgccca aggcgcataat agttctacag aagagggtgaa 120
ggaggaagta aagtgcata aggccattat agagaggctg atacagaggg aaggccatct 180
tgtagtcata gatgaaggaa cagcggcagc agaagggtgct acggcaaggg catcggagca 240
cagaatcctg gctgttaacc caaactacgt cattgattga ttaaccagct gaggtcacac 300
agctaactag atccatcata tgtggttgac caatatagca gacattcaaa cggaagacat 360
cctgttgta tgctctagaa atgatatgtt gcacctgcca tcccc 405

<210> 2026
<211> 467
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-H11

<400> 2026

aggtaccgat ccagaattcc cgggtcgacg ggtatataca tggtatataa aaaaaatatt 60
agtaattata aaaagagtta aaaaattcat aaactttttc ggattttttt actttctttt 120
gtagatgtat aattttttta acgaaatcaa aactccatt gacatttggg cgaataacaa 180
tategtaatt acaaaaagag taaaaaatta tgaattgttt tggaactgaa ttttagtttt 240
ttttagtttg tataaaaagt tcggtgaaat aaacaccccc attgactttt gggattaaaa 300
aggaaaatca taattacaaa aagattcaac atagtctgaa tatttttgaa aattattcca 360
ctttttcgta gctatataga aagtttgga caaaattccc attgatttct gggcgaaaaa 420
acaaaatcac aattacaaaa aagttaagtt ttttaatttt ttggaaa 467

<210> 2027

<211> 349

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-H4

<400> 2027

ggtcgactga gcaagggtgga ccgcgtgctc tactccctcc gtcgtcaacc cgcacaacta 60
cggcttcac cgcgaaccc tcggcaacaa ctccgacca atcaacttct tcgtcatcat 120
gcaggacccc ttcgtccccg gatgcttcct ccgcgccaag gtcacgggac tcatgcccat 180
gatcgaccag ggcatgccg acgacaagat catcgccgtc tgcgccgacg accccgagta 240
ccgccacttc aacgacatca aggacctccc tccccaccgc ctgcgccgaga tcaggcgatt 300
cttcgaggac tacaagaaga acgagaacaa agaggtggcc gtcaacgac 349

<210> 2028

<211> 403

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-H9

<400> 2028

gtaccgatcc agaattcccg ggtcgacggg cgcttgaca ggtcaggata ccaagcgagt 60
gtttaggatc ccacacaggg catttcttga catgctccta gcacaccttg ggctaatac 120

cggctcagta tgatcgtgtt gtacatgagg acggcaagat ctgtgtgacc atctttttca 180
 acacctctac attggatctt ggaggaccaa tcagtatgaa cgcgtcgtgt catcattcct 240
 cctgggtctac attatgccca agacatgcaa agttgtggat cgtctgtaag ctaccatttg 300
 ctttcgtacg tcctatgtct gtgatatttg ctactaaacc tattgtgcta cgtgctttcc 360
 gttttcgtac attgttaggt ggctccctat tgtgtgcata caa 403

<210> 2029
 <211> 416
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-A1

<400> 2029

taccgggtcca gaattcncgg gtcgacgggg tgcccatgac agctgaggtg acattaccgg 60
 tactggcacc ggcgagcgcg acaccggcca tgactacact cggcatggag aagccgggag 120
 tgaagctcaa tggtaagaag tctcactg aaatgatgca gatcatggat gaagctagtg 180
 aacttctgaa gaaaggcaat gacttctct cgtgaatga ggagaacgtt aagcctttgt 240
 tgagtatgga tggatcagct gatgcatggt ggcttgatag tgggtgctagt aaccacatga 300
 ctggttcacg gtgcaaattc aaggagatgg atgaaagcat ccgtggccat gtgaagctcg 360
 gagatgggtc tactgctctg attaaaggga aaggttcagt catggttgaa tgcaag 416

<210> 2030
 <211> 412
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-A2

<400> 2030

accgggtccta aaatcncggg tcgacggggac ctcaccggca gatccctcag ctatcagggg 60
 aagcagccat cagcggagat tgaggggtgcc tctccggcga gagtgctcgt gtcgtgggtg 120
 tttcccacca gcggcatggg ggaggcggtg tcctctaccg ctaggtctac ttgctggcga 180
 cctcaccgtc accagcccat ctgtagccta cttgaatgga tatggttcct gagagaccat 240

ttcttatgca tcaggctctg aagggtgatg ttgcttggtt agatatctat ggttccaaat 300
tattcaaaac ggttcatggt atgctggatg ctattttatt gagagtggct tcgaacaata 360
tggcatgaac atatttggtt tctctttggc caataatgaa atgatctttg tg 412

<210> 2031
<211> 417
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-A4
<400> 2031

gggtcgacgg ggagcgccca caaaggattc agtcccatcg agaagaaatt cataagggtg 60
ctacatgatt gtaatgtcgg tccatcaaga atggtccaaa tactgtccct gatccacgac 120
cgagatggga gcctgagtag catgccctac ataccagcag acgtcaaaaa cctaaaggca 180
aagtaccgta gagagagcag gttggctgac atagaagaca caatagccta cttcgaagag 240
aaagcaaaag cagataatga tttcttctac aggataaggt tggacgatga ggaccgtgtc 300
aggaacatgt attgggtgga tgggtgctgca agaagagcct acaaacattt ctgtgattgc 360
atttcattca atgcaacata tctcacgaat atgtacaaga tgccccgtgc tccattc 417

<210> 2032
<211> 424
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-A8
<400> 2032

taccggatcc gagaattcgc gggtcgacaa ggagcaacac cactgcaaag actgcggcat 60
ctgcagagtt gggggcaagg acaacttctt tcaactgccac aagtgcggat cgtgctactc 120
ggtgaccctc cgggataagc atgtctgcat cgaggactcg atgaagaaca actgcccgat 180
ctgctacgag tacctgttcg actccctgag ggaggcgtcg gtgctgcat gcggccacac 240
catgcatttg cagtgttcc acgagatgct caagcacgac aagttcattt gccccatgtg 300
ctccgtgtcc atctttgaca tggagaaatt cctgagggcc ttagatgccg agattgaggc 360
gaagttctta cacatgggaa agggatggat cgtgtgcaac cactgctggg acacgacccg 420

ggtg

424

<210> 2033
<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-A9

<400> 2033

cggggtcgacg ggctgggtgc aggacctca tattcaagag ctgcttctca agcagacgga 60
taacgcaaga gctgccgccc gagagaaagc caagatggat caacttgagt tagacgcggt 120
tactccattg tatgaaggat gcaggcccca ggatacccg ctgaaagtaa cgctcatggc 180
tctggagatg aaggtaaaac acaaaatgac cgacgcatgc ttcgacgaga acatgtcatt 240
ctggcagcaa cgtcttccca aggggaacaa gtgcccgaact agtttgaggagg aggcgaagaa 300
aatcgtgtgt cctctggatt taccgcacgt gaaataccat gtgtgcatga acaattgcat 360
catttatcgg gacgagcaca cggagtctac catatgtccg gtgtgcggtg tcaact 415

<210> 2034
<211> 435
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-050-Q1-E1-B11

<400> 2034

taccagtcaa gaattcccgg gtcgacgggg agtcttcgaa tggttgcata attatttagc 60
tactcattga tcttcacgta tatcttggtg gagtagtttg tcgtttgctc tagtgcttca 120
cttatatctt ttagagcacg gcagtgggtt tattttgtag aaattaatga actctcatgc 180
ttaacttata ttattttgat agtcttaaac agcatggat tttgaatgaa aactatcata 240
ggaagtgaat tggatgctat gatcaatttg atacttgata attgttttga gatatggagg 300
tagtgatatt aaagtcacgc tagttgggtg attatgaatt taaagaatgc ttgtgttgaa 360
gttatcaagt cncgtagcat gcacgtattg ttaaagttgt gtagaaaatt tgatgcatga 420
agtgtacctg gcctg 435

<210> 2035
 <211> 431
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-B12

<400> 2035

aattcncggg tcgacggggc cagaaagcaa tgaaacatct aaataaactt ttcccgaaca 60
 aaatttccat ccagcttcca caggacgaag cattacttac cagttggaag caacaattgg 120
 atcgtgatgt tgaaaccctt aaagcaaaat ctaacatcgg tagcattcgt acgtttttga 180
 atcgcagtgc gatcgaatgc agtgaccttg aagaattatt cattaaagat cagtcactga 240
 ctaatgaaaa tgtggacaag attgtcgggt acgctgtcag ttatcatctt aagcacaata 300
 aagtcgaaac ctccaaggac ggtgaactta ttatcacgag tggaagcctt aagcatggcc 360
 tcgacatgct acagagcatc catagtata acaagagctc aaaaaaatcg ttaaaggatg 420
 ttgccacaga g 431

<210> 2036
 <211> 433
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-B4

<400> 2036

gggtcgacgg ggaaaacgga cagcccatgg acgaggagta tgaggaggag caggttccag 60
 attactcgag agcctattct ggtggattga gacccttgc ccatgtcatg atggatgatg 120
 agaccgagga tgatgatgaa gatgctgaag gggacggaga gggtgacgag gaagaatatg 180
 acgtgaacca tgcttccgcc gatgttgatg atgagatgga cgaggatgat gatatagggtg 240
 atgatgggga tgatggtggt gatggagttg aggtgaatgc agatgaagat gaaggcgcca 300
 cctcatactc gtcagagtac agtgaataag agcttctgtc tccggtgacc atttatgcag 360
 ggtagttaat taacgccgtt ggtcactgat ccgatagct tggcggaagt gggtttggga 420
 actgatataa aat 433

<210> 2037

<211> 436
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-050-Q1-E1-B6

 <400> 2037

 gtaccggacc agaattcccg ggtcgacggg actgcctgct ccctcctccc gcgaccggct 60
 atgctgctgc gtagacctca cgcgccacc gtactcccat cgctgacctt gccatccctc 120
 tactcatcca cacctgttgt tattctccgg ggacggcaga cgaaccagta aaccctcgta 180
 ctctccacg tgggaacaaa ctactgagtc ttccctggct ccatgtcggt cccttcctag 240
 gcctcgccgt cgtccaccgc cctgggtgctc tcggtgtggc ctgggtcaaca tgggtcaatga 300
 acgacatcca tcggaagtgg actgtacgtg gagaggctga cagctgggtc cacagccgca 360
 cgcaaggaaa tgcctcctta ttacgcgcaa aataatgatt ccctcactgt cggatgtggg 420
 gttccggcaa aaccct 436

<210> 2038
 <211> 433
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-B8

 <400> 2038

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 gcctcccgag ctcgtttctc tccacacacg ctctccacac acctccacaa caccgtagga 120
 agccgtagcc cggccgggta ggcctctggc cgccgttctc gcccgcagct cgcacgcgat 180
 ccccgctccac tgccccctcc ctctctagag ccgcttgagc tctactgact tgtccgacgt 240
 gtccgtgggtg gtccactggt gcttgctggc gctgttgagg ctattggact ggacctacct 300
 cactggaatc accatctccg acgagctcgt tgcgtgacac tcctctccag agaaagcgcc 360
 gccaccgcgc cgcccaactc tgcttctctc ccctcncct ccgacttgat tgctggggct 420
 cgctgtcagc cgc 433

<210> 2039
 <211> 430

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-050-Q1-E1-B9

 <400> 2039

 atgcccgggt cgacgggggg atatggtacg cgtgagctac caaggaagat ggcgcgggcg 60
 ggcgagcagt gagcgggggt aaatggtgtg cggccgacga tggggaagag aggaggaaga 120
 agaagagact agttgaatag ttctctctga ccgagatggg gaataaatgg atcgcaagga 180
 cttactttct acagtatccc tatgcatcta cgctcacttc actcattttg ctctgtacct 240
 agtcacttgt tgaaatctgt agaaagacaa atactccgta tttgggaaca gaggagggt 300
 ttactccgt actatttggg aacagaggga gtatcaccat atggaggga cagaggaagc 360
 ttgaaatatg aacatgtcaa tgggagggat taagcccat gcatgcatgc atgcatgcaa 420
 catgcaacac 430

<210> 2040
 <211> 433
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-050-Q1-E1-C10

 <400> 2040

 attcccgggt cgacgaggag gaagagcccg aggaggagct aggaactgaa tatctggtgc 60
 agccgcttgg ccgtgctgaa gacgaagagc attccagtga cttcgagcca gaagaaaatg 120
 gtgatggtgc tgaggacgag gagattgagg atgacgatgc tgaggatggt gaggatcctg 180
 tcaaggcgca atcctcatca aagaggaaga ggtctggtgg ggaggatgaa gatgatgacg 240
 acggtgatga tgatggtgat gatgatgaga agcctccatc aaagcgatag tcaatttgtt 300
 cgtgctgac tgtgatcttc tctgcttggg ccaagaagga aaataatcct catggagagg 360
 attgttggtg aatgctgtag ctttaggaca tctgtggtag gtgtagcagc tcaaacttga 420
 gtctacccat gtt 433

<210> 2041
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-C11

<400> 2041

gtaccagtct agaattcccg ggtcgacggg gttgaatgaa tccattgtga gaagagccct 60
tgtgatcatg caccagaggg acgaagtgga gtacaagagg gagcgccatg tgattgtccg 120
caaggcttga gctgaaccga aatgatggaa ctaccatgga aaccctctgg ccatctgatg 180
tgtgtgtata agtagtgctg acactgcagc ctgtttcctg aggaaatttg ttgcgtcggt 240
gaaattgagt tgtagttgta ctactttaag ctgtagctgt agccctaaat tatcttgtgt 300
cgaactgaag atgtaccaca gtaagttcat tcatgattgc aacatttggg cgttctgcag 360
ctgagcagag ttaatgccta ggaaaccgaa acttgtgctt 400

<210> 2042

<211> 418

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-050-Q1-E1-C2

<400> 2042

cgggtccagaa atcncgggtc gacgggcggc gggccagatc gaggaggaag gaggcgaagg 60
gatcgggatc gggcagatga gaggtgcgcg aggggatcta gcagggctcg tgcgaggaga 120
agcaagagga gaggtggcgc ggcgtacggg agagatggga tcgagggaaa aagtgggatc 180
gagggagagg gaggtgcgcg cgctggaggg aagagggagg gagagatcga caggaggtct 240
cccctggcgc tagggttaga gggaaggagt gcggtcgggc ttccaggggt ttgctgggccc 300
ggcctggacc aaggagaggt tgggcccggac tgggctgcag atgggccggc cagcagctct 360
ctctctctct ctctctctct ctctctctct ctttaatttct cttttcagca naagagat 418

<210> 2043

<211> 442

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-C5

<400> 2043

aattccccggg tcgacgggac aggccatgtc atcctccgcc ccaaagcagc tagtggcagg 60
gcctacaact gctgaggacg caccaccggt tcagatgccg gccgctgaag cagcgggggg 120
agaccagct gcagcacatg ctacagcagc caacctgggtg gaacagactg ctaagcagtc 180
tgatgcttcg gaaccgccta ctaagcagtc tgtaggtcca gaaccgaccg ctcatcagtc 240
tgttgggtccg caggcgtgtg accagcatac caatgcgtca gcacttcctg ctacagcaaac 300
caacgcgttg gcacggcctc ctacagcacac cgacaagttg gcaccacctt cgcagaaacc 360
cgacatagct tcaacgcatt gtcagcagtc cgatgcctgg ctctacagc ccagcagttt 420
gtcacagcag caccgccagc tc 442

<210> 2044
<211> 462
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-C7
<400> 2044

attccccggg gcacggggat gttctggctg gcatgaagca aggggatcta atcatttggg 60
atgttgagca gcagaatgcc caagggtgat atagttctac agaagagggtg aaggaggaag 120
taaagtgcatt caaagccatt atagagaggc tgatacagag ggaaggccat cttgtagtca 180
tagacgaagg aacagcggca gcagaagggtg ctgcagcaag ggcacggag cacagaatcc 240
tggtgtgtaa cccgaactac gtcattgatt gattaaccag ctgaggacac agctaactag 300
atccatcata tgtggttgac caatagagca gacattcaaa cggaagacat cctgttgtca 360
tatgctctag aaatgatatg ttgtacctgc catccccttc ccaaggaagc ataagatctc 420
tggaatttgt acctcaatca aagggttaaaa tgtggttaatt aa 462

<210> 2045
<211> 443
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-C8
<400> 2045

gtaccggacc agaattcccg ggctcgacggg gaagaagacc aaggccgaga agcggccgcc 60

gaagtccaag gagggcggcg cgcacaagaa gaagaagaag gccagaaga gcgtggagac 120
gtacaagatc tacatcttca aggtgctgaa gcaggtgcac ccggacatcg gcatctcctc 180
caaggccatg tccatcatga actccttcat caacgacatc ttcgagaagc tcgccggcga 240
gtccgccaag ctggcccgtc acaacaagaa gccaccatc acgtccaggg agatccagac 300
ctccgtccgc ctgctcctcc ccggcgagct cgccaagcac gccgtctccg agggcaccaa 360
ggccgtcacc aagttcacct cctcttagat aatctgttct cgtatcttct tggtcgttcg 420
atggtactct gttatactac tcg 443

<210> 2046
<211> 418
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-D1
<400> 2046

gggtcgacgg ggaagtcggc cgccaaggag ggcggcgaca agaagggcaa gaagaaggcc 60
aagaagagcg tggagacgta caagatctac accttcaagg tgctgaagca ggtgcacccc 120
gacatcgga tctcctccaa ggccatgtcc atcatgaact ccttcatcaa cgacatcttc 180
gagaagctcg ccggcgaggc cgccaagctg gcgcggtaca acaagaagcc aaccatcacg 240
tcccgggaga tccagacctc cgtcgcctc gtctcccccg gcgagctcgc caagcacgcc 300
gtctccgagg gcaccaaggc tgtcaccaag ttcacctcct cttaggctgt tcgtcttctt 360
gtgtctcgta gttagctgtt cgggtgtgtt tgtggccgtg ttatcctgta agaatcgc 418

<210> 2047
<211> 366
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-D10
<400> 2047

attcccgggt cgacggggac gcggacggca agggcaaagg gaaggagagg cgcagcaagg 60
agcagaagaa actcaagcag agaggaggaa agacaggggg caggagattt gaagtaaaga 120
gtaaactgaa gagcaagaga agatgaaaat gtatgtgtat ctttgaaga aattttgcc 180

gtttagtctg ttttttcgtt tcatggtagg tttcaccggt gaaaaaacat gccttgtgcc 240
 agtgtagcct tgcatagttt agtgcgaggc gattttcatg ttcaaaaaaa aaaaaaaaaa 300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaca aaaagataaa aacaaaaaat aaacatacaa 360
 acaaaa 366

<210> 2048
 <211> 388
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-D11
 <400> 2048

attcccgggt cgacgggctc tcctatgcta gttgattatt gttcctacaa gttatttgct 60
 cacaaaatcc ctatgcatag gaagtgggtt agacttaaata ttgctaataca tattcttcat 120
 gatgctctct ttatgttaca attcttatct tttatgtgag catcgttgag atcatcatgc 180
 ctagctaggg gcattaaacg atagcgcttg ttgggaggca acccaatttt attttggttc 240
 cttgcttttt gttcctgttt agtaataaat aattcatatg gcctctgctt agatgtgggt 300
 ttatgctttt aattagtgtt tgtgccaaagt agaacctttg ggaagacttg gggaaagtcn 360
 tgttgatcat gctgtaaaaa acaaaaac 388

<210> 2049
 <211> 181
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-D12
 <400> 2049

attacaacac cctatagtga gtcgtattag ttcctacaag ttatttgcg agagaatccc 60
 gatgggcagg aagtgggtga gatggatatat gtgctcgta gattctgcat gatggtcgag 120
 gtgggtgaga attcgtatct tttatgtgaa cggcgttggt tatgatcgtg gggagttagg 180
 g 181

<210> 2050
 <211> 398

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-D2
 <400> 2050
 cggtcgacaa ttccgggtcg acgggcgtgg tcagcagcgg attcgacact attctttttt 60
 ctgctttcct ctgcttctat tctctttttt ggcatcgcct ctattctttt ttttcttttt 120
 tgcagggttg gcatcgcctc tattcgaaaa gccggagaat agaatggggg atgttctgta 180
 atggtttttg atatacttaa gtacataatg catgcagatg aaccggcaac ggatgcacgg 240
 tgaccgaaca tctatattga gggcctgcat aattttctcg aagtggctga gacaaacaag 300
 cagaatggtt ttatgtattg tccatgtact gtctgtgggg caaaaaaaaa aaaaaaaaaa 360
 aaaaaaaaaa aagcggccgc tctaaaggat tcaagctt 398

<210> 2051
 <211> 456
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-D7
 <400> 2051
 attcccgggt cgacggggtt tgcaataagt atgtgagttc tttatgccta atgttgagtc 60
 catggattat acgcactctc acccttctac cattgctagc ctctctaata ccgtgcacct 120
 ttcaccggta tcatacccc accatatatc ttcctcaaaa cagcctccat acctacctac 180
 tatggcattt ccatagccat tccgagatat attgccatgc aactctccac tgttccgttt 240
 attatgacac gtcctcatcat tatcatattg ctttgcata tcatgtagtt gacatcatat 300
 ttgtggcaaa gccaccgttc ataattcttt catacatgtc actcatgaat cattgcacat 360
 cccggtacac cgccgaaggc attcatatag agtcatatct tgttctaagt atcgagttgt 420
 aattcctgag ttgtatagaa aattaaagtg cgatga 456

<210> 2052
 <211> 420
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-D9

<400> 2052

attcccgggt cgacgggatg aaccaatccg caccgcagac attccgttcc aaggagatct 60
ccaagagcaa cgtggtggat gacatggtct cgagcaatgc taccctctac gagcctgggg 120
agcatcctga ccacgtcgtc gtgatcaagt atgtgccata cgttggagac agcaagaggg 180
ccatggacga gtacacctcg gagatcttca tggggggcaa gagcaccatc gtgctgcaca 240
acacctgcca ggactcgctc ctgccgcac ccatcatcct tgacctgggtg ctctggccg 300
agctcagcac caggattcag ctgaaagccg agggagagga caagttccac tccttccatc 360
cggttgccac catcctgagc tacctacca agggcaccct ggttcctcct ggcacaccgg 420

<210> 2053

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-E10

<400> 2053

gtaccgagtc cagaattccc gggtcgactc gactgcggag tgcgagagat tggctttttt 60
agacgcctat tccgggtatc atcaaaccg tctgtatgga cctgacgaaa tcaaacagc 120
tttcatcagt ccattcgggt gcttctgcta taccaccatg ccattcggtc tcaagaatgc 180
cggagccacg ttcattgagaa tgattcaaaa gtgtttactc actcaaatca gtcggaatgt 240
ggaagcatac atggatgata tcgtgggtcaa gtcacgaaag ggttcggacc tgttgactga 300
cctagctgaa acatttgcca atctcaggag atatgatatt aagctcaatc catcaaagtg 360
cacattcggg gtgcctggca gaaagttact cgattttctc gtttcagagc gaggaatcga 420
tgctaacca gaaaaagtta gcaccata 448

<210> 2054

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-E11

<400> 2054

ggtaccgagt ccagaattcc cgggtcgacg gggacgggga gccgccggtt cgaagaatgg 60

ataaaggcct cgactccggc gagtgctgac ggtggcaggg ccagaccggc ggccgccgga 120
gacgtcgtcg ggccggagcaa ctgccggctg tttgggttct ccctgactga tcagaaggtg 180
ctgggaggag caggtgaggg tgatgccaaag gaaggggacg cggatgatgt ggtggcggag 240
tgccgccacc cgcgggtgct cgacttgttt gggcgcggcc accctgctcc cggcgctctg 300
catgccatcg tcgccgctcc cctggggatg tgatgggtgct gctcagttgc gtacgttgta 360
gtatcggaca attggttttc cgttggttga agacggacgc catctgt 407

<210> 2055
<211> 413
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-E12
<400> 2055

attcccgggt cgacgggtgt tcctctgtgc gtgaggagcg ctctgtgatt ccgctaacgg 60
tgatgacgcc acgtggaccg ggcattctga gtgtaaggta gccatagtgc ggcaatgcgt 120
tgaaccgggc gaaggccggt cttccaagca atgcatgatg gtcgctttgg aaggggtgcga 180
tgatgaagag tagttcgtcg cttctggagt tgccctggaga gccgaatggt acctctagta 240
cgaaggagcc cctgctgtag gcttcaacgc ctgatatcac cccttcaaag gtgggtgttc 300
tttgactaat tctggatggg tctatcccca tcttgccgac agtgtcctca tatataagat 360
tgggactact gccaccgtcc atgaggacac gggtgagacg gtatccgtcc aat 413

<210> 2056
<211> 427
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-050-Q1-E1-E2
<400> 2056

acggtccaga aatcncgggt cgacggggga cacgccttcc catcgaaaag agcaaaccac 60
ccgcccgcgc gtgccccgta acctaggaac tccgccgatc cgaaccccc aaggccgcag 120
catccagagc ttcttccccg tcgcgccttc gaagaacca caaaggaacg agtgtgaatg 180

ttctaatagat gtcaaaagcc ggcaagaagt ctagtagtag taattccatg tacgaagctc 240
cccttggtcta caagattgag gacgttcgcc ccgccggagg aatcaagaag ttccagtctg 300
ctgcctactc caactgcgcc cgcaagccct cctgatattc ccttcgcatg cctctcgacg 360
tagcttagga tttctttact gcaatttccc tttccctttc gtgcaataat tctcccttgg 420
ctggctg 427

<210> 2057
<211> 435
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-E6

<400> 2057

gtaccggacc agaattcgcg ggctcgacggg ggagaggaga aaaatatattt tcttaaataga 60
atctagtcaa accaaaaata ttgatttaac ctgaatcgga tgatttttgg aggctctatg 120
ggctctatatt tatagggtgga aaagagggtt aggggtcaaa ggctaggcaa tgtgagacta 180
aacgtagacg aaatagaaaa gaaacagagg aggcgggtcg catgggccta aacgcgtaag 240
gcgggttcggc cggccgcgca gctgcagttt ttttttaaac aaaatttggc gtaaaaaaat 300
aaaaaggttg gctgggcctg gcccatatag gaaaaaaaaa tggggcgccc attggtacta 360
tgatgtgcac ctgggcggca gttagtgatg ggccacatgt atagtttttt caatagaaac 420
agaaggaaaa gagaa 435

<210> 2058
<211> 437
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-E7

<400> 2058

ggtagcgatc gagaattccc gggtcgacag cgacgggtac atgcaggcca tgtcataggt 60
taattaagtg gtccatcccc aacccctctg cttcaactgc catcgatctc ttcaaaggcc 120
ccgccgctaa tctccccgcg catgcggtca aggatttgca atccttgtag gccatcgatc 180
ccattttgtc cttcccgaag gacgcattct acaacggcgg cttggaatcc tcaattatca 240

agtcatatct catcgaccac gaccacgagg agggcaccca caaagcgtct tccaaggtga 300
aatagcccat ctgcgacatc agagagcaca ccattggttt gtgctcttct aactggaagg 360
atccccgtcca tgacaagtta ggcaatatcc tatcagcaaa tattactttt tctaagctag 420
ccaaccgcac ccttttg 437

<210> 2059
<211> 372
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-E8
<400> 2059

aattcgcggy tcgacgggga taagtaccgc caccacggcg gcattgttac aaataacaga 60
tgcaaccagc gcacgggtctc accaacacat caacagacga tctcgactcg aagtcacat 120
atgtcgggtgt acgggcccgc agatcgctaa tgaggggtca cgtacatcac ctggaatgtt 180
caagggacca ggagacaggg gacacgatgt ttaccaagt tccggcctac atgatggaag 240
taaaactcta cttccagcct aattgatatc gctgcaaaag agtcacacaa gtactgatca 300
atgatcgatc atcttaaagg ctaatcccta gaagtcacc cggtatgact atgataacct 360
caatggacta aa 372

<210> 2060
<211> 424
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-E9
<400> 2060

taccgagtcc agaattcccg ggtcgacggg gaagagtatc gtcagcacga cggcgtggtg 60
acgatcttga tgaactacag cagcagggct tcgcctaaac tccgctacag tattatcgag 120
gaatatggtg gcagggggca ccgcacacgg ctaaggaatc gatcacgtgg atcaacttgt 180
gtcaacttgt gtgttttagag gtgctccagc ctccgtatat aaaggaggag aggaggggag 240
gctggccggc caaagagggg ggccgaggag agtcctactc cctctgggag taggattcct 300
cccccaatc ctagtccaac taggattcct cggaggggaa gggagagagg ggggcccggc 360

accttctcct agtcctaata ggactagggg aggggaaaga ggcgcagcca ccttgggctg 420
 cccc 424

<210> 2061
 <211> 461
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-F5
 <400> 2061

gtaccggaca agaattcgcg ggtcgacttc caccaaaacg atatccatca tctcatcgaa 60
 agacgggaca cctttgcctc tatcaagtgg tatcagatct ccaggttgct cggtagagatt 120
 ttacagtatt tttttcgtaa tttagatcga gtctgttctt catacttata gtccacgaaa 180
 aagccaaaaa aaattagggg tagttcatcc catccgaacc aatctgagcc tttgcataat 240
 cttttctgta tttgttttgt taaatttgcg gttgcatcgt cgtgtcaagt tgctgggtctt 300
 agcgtctagt ctttttagagt ttcgagttct gttcacaggt tgtcacgtcg ccgctgccat 360
 atatcaccac cgcacatca tcgtcgctgt tgccatatac caccaccaca tattcaccgc 420
 caatccgaat ccatatacgc caacacatat ccgccggcat c 461

<210> 2062
 <211> 424
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-F6
 <400> 2062

taccggacca gaattcccgg gtcgacgggc agatacagag tatgaagcta atggggcctg 60
 atgggtacga caagagcgtg tcggacgaca cgagtacgag tgaaacctct agcatctccc 120
 tcggtcagat cctgaacagg aggcaggcaa tcttgactta tagcagtgat acaagtgcta 180
 acaacaaatt ctcaggaaag aggaagaagt ttgccttcac tgggctttca gttttcctgg 240
 ctaagcaggc taagagcaag aagaagagag ggtcagatga gaactgatgt tagctctgcc 300
 agaacactag ctagttactg agtgttttga cccctattt ccatgtctgt gttcatgtac 360
 aatgttcta ggaggagtat atgtttctag gtctaagtag gttctgatat ttatgtagct 420

ccat

424

<210> 2063
<211> 441
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-F7

<400> 2063

gtaccggacc agaattcccc ggtcgacggg tacgctaatag aaaatgtgaa caagcttttg 60
gtggggaaca agtgcgatct agctgagagc agagtgggtt cttacgaggc tggcaaggcc 120
cttgccgatg agattggaat accattcctg gaaaccagtg ccaaggatgc aacaaatgtg 180
gaaaaggcat ttatgaccat ggccgcagag ataaagaaca ggatggcaag ccagccggct 240
ggaaatgcca gcaagcctgc caccgtgcaa atgcggggtc agcctgttgc tcagcagaac 300
ggatgctgct cgtcttgatc aacactcaaa gatcacagta gtgttcttgc aaaactcaat 360
tggttgttct tccctgtaa attaagtga ctactatcat gccgtctgtt ggaagaagtg 420
tcatgtcccc taactacaac a 441

<210> 2064
<211> 386
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-F9

<400> 2064

attccccggg cgacgggatg gtatatcgct agccctttca gagaccgcaa aacataaatg 60
caaagcacct ctgaagatca aggactgact aaacattgta attcatggta aaagagatcc 120
agtcataccc aatataaatt aatagtaatg gatgcaaatg acggcgggtg tctctaactg 180
gtgattttta ataagagggt gatgactcaa cataaaaagta aatagatagg cccttcgcag 240
aggggaagcag cgattttag aggtgccaga gctcaatttt aaagcagaga taaataatat 300
tttgagcggc atactttcat tgtcaacata acaaccgaga gatctcgata tcttccatgc 360
tacacacatt ataggcgggt cccaag 386

<210> 2065

<211> 444
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-050-Q1-E1-G10

 <400> 2065

 gtaccggtct agaattcccg ggccgacggg ttttcatata tcagtaactt tacttgaggc 60
 tatattttta ttcaccacat gataaatggt ttgcttggag cgtcttgtat gatttgagtc 120
 tttgcttttt agtttaccac aatcatcctt gctgtacaca ccttttgga gagacacgca 180
 ggaatcgga tttattagaa tactctatgt gcctcactta tatcttttga gctagataat 240
 tttgctctag tgcttcactt atatcatttt agagcacggc ggtgggtttta ttttatagaa 300
 actattgatc tctcatgctt cacttatatt attttgagag tattctagaa gagcatggta 360
 atttgctttg gatataaaac tagtccta atgatgggca tccaagatgg gtataataaa 420
 cactttcata taaagtgcgt cgaa 444

<210> 2066
 <211> 409
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-050-Q1-E1-G12

 <400> 2066

 gtaccagtct agaattcccg ggctcgacggg aagctttata tcgatatcag agccaggtgt 60
 tccgttttct tttatctttc ctctgtagct accatgccaa taaacaaggc gatcgtcaaa 120
 acatatgtgc actcacttaa agtagctatt tgcgccccag attttcctgc tgtaataaga 180
 acatgtctgt tgaattgttt tgctgctcaa aactatgatg gatgggtcttt aaaaaaaaaa 240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa ataaaaaaaa aaaaaaaaaa 300
 aaaaaaaaaa aaaaataaag aaaaaaaaaa aatataaaat taaaaaaaaa aaaaaactta 360
 aaaaaaaaaa ataacaatca aaaaaaaaaa ggggccccta aaaggaata 409

<210> 2067
 <211> 431
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-G5

<400> 2067

gtaccggacc agaattcgcg ggtcgacggg gaggatgacg acgaagtcga cgaggaggaa 60
gagcccgagg aggagctagg aactgaatat ctggtgcagc cgcttggccg tgctgaagac 120
gaagagcatt ccagtgactt cgagccagaa gaaaatgggtg atgggtgctga ggacgaggag 180
attgaggatg acgatgctga ggatgggtgag gatcctgtca aggcgcaatc ctcatcaaag 240
aggaagaggt ctggtgggga ggatgaagat gatgacgacg gtgatgatga tggatgatgat 300
gatgagaagc ctccatcaaa gcgatagtca atttgttcgt gctgatctgt gatcttctct 360
gcttgggcca agaaggaaaa taatcctcat ggagaggatt gttggtaaata gctgtagctt 420
taggacatct g 431

<210> 2068

<211> 421

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-G6

<400> 2068

attcgcgggg cgacgggggt ttgacaaact attcatcttt gaattagaca aggaccttgg 60
tatttcatcc atggagtgtg taattgactc tatgggtgag ttaggtggaa tacctcaatc 120
gttgtcggaa gagaaggcgt atatgataag ggggtatcta gttgaatgtg gcgatagact 180
gttgatgggtg aaacggtgga ttcacatctat tgcccgttca acaagtgatg actttttcga 240
gcataaccgt actgttgacac ttgggggtttt tgaggcggat ttgggcacccg atcctgctgg 300
atggagaaca gtaaatgatt tggatggcca tgcactcttt cttggccagc atagctccaa 360
gtccctgcgc gctggagaat gcagttggat acaagaggac tgcacttact tcatgtgtga 420
c 421

<210> 2069

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-G9

<400> 2069

gtaccagtct agaattcccc ggtcgacggg aagataaagg ccgccgagaa caccaaggtc 60
atctacgccc gcgcggagca gtacgccggg gagtatgagg ccaggacaa ggagctgggt 120
caacttaagc gtgaggcccc gatgaagggt gggttctatg tcagtcctga ggcaaagctg 180
ctgtttgtcg tccgtatccg tggatatcaat gcaatgcacc caaagaccaa gaagatcttg 240
cagcttttgc gtttgaggca gatttttaat ggtgtgttcc ttaagggtcaa caaggccacc 300
attaacatgc tgcgtcgggt tgagccatat gttgcctacg ggtaccctaa cctcaagagt 360
gtcaggggagc tgatctacaa gagaggttac ggaaagctca acaagcaaag gatccctctg 420
gccacaaca aa 432

<210> 2070

<211> 402

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-H1

<400> 2070

gggtcgacgg gcctcgacaa ggttgtcaag cccaatgttg tgtttcttaa ggagtgcggg 60
ctagatgatt gtcattattgc caagctgtgt atccctgtac cgaggatgct cgccaccaac 120
ccggagcgcg tccgggcaat ggtggcatgt gctgaaagat tgggtgtacc tcgtggcact 180
ggaatgttca ggcaagcgct acgggctgtc gcgtttctca acgaggagaa gattgccgcc 240
aaagtgaact acttgaagag tacgttcagg tggctctgatg ccgaagtgag cattgctgtg 300
cgcaagtatc cgattctgct ggagaagtca aaggaatctc tgaagcgag gtccgagttc 360
ctgttctata aggtgggggt ggaacccgtg tacattgctc at 402

<210> 2071

<211> 406

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-H10

<400> 2071

gggtcgacgg ggacttccaa tcatatccag acgcaggagc agaacctcag gaggagacac 60

agcagaagca gcagcacgtc gaggaagggg ctactactac cgggcaggac ggcgtgcagg 120
 ctgcccagtg ctcagccaac gacgtcggcg gtgtgggtcca agacgcatat gtgcagaagt 180
 acacgtttcc tcccggttgg ggtgacgtct cgagcatccc cgcgacaggc tgggagtgac 240
 cgaccagatc tcttttcttt tcttttccgt cggggccatt gctgttggtga gaataagacg 300
 gggatcggcc ttgoggagct aacttccggg ggcatacctga actcacctc gtcggatgct 360
 aattctgaac gtctctagtg tttgttcgct gcgtcacggt gttttg 406

<210> 2072
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-H11

<400> 2072
 attcccgggt cgacggggcg gcgcactgga gacgcagatg ggtggcgggg ttaaagccaa 60
 ggaggagtac cgctttggct cgtccaaggt ttctcctgct cctgctgaag aagtggctgc 120
 tgctgccgct gccaaagggga agaaatccag ggcaagaag gctgctgctc ctgctcctgc 180
 tgctgccgct gccaaagggga agaaatccag ggcaagaag gctgcgtcgc ggatagactt 240
 ggacaaggct gaagccgttg tgtataaagc cgatatgaag gcgagggagt ctgccagggt 300
 agccaaggcc aaggccgagg aggccgaaga agctgccagg atagccaagg ccaaggccga 360
 ggaggctgaa gaagccgccc gggccgcaa ggcggatgct g 401

<210> 2073
 <211> 425
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-H7

<400> 2073
 ttgcggggtc gacgggagga ggttaagcgc ggagttccag ctgctcttcc gtctgatcaa 60
 ggggctgata ttcataacat tcatctccat catcataatc ttaacagcaa tcgcccacat 120
 gacagtcctt gacatcttcg tctgcatact cgccttcatt ccgactggat ggggcctgct 180
 tctgattgcc caagcgatca agcctgtcgt cgagatggtc gggctgtggg ggtcgggtgaa 240

ggctctcgcc cggggctacg agatcctgat ggggctcctg ctgttcacgc ccatcgcggt 300
 ccttgcggtg ttcccccttg tgtccgagtt ccagaccagg atgcttttca accaggcggt 360
 cagcagaggc ctgcagatct cccgtatcct cggcggccac aagaaggacc gagccacccg 420
 gaaca 425

<210> 2074
 <211> 393
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-H8
 <400> 2074

gaagaagagc gtcctggctg caggtttgca gtcctcaaaa caaaaaaaaa aaaaaaaaaa 60
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaataaa aaaaaaaaaa aaaaaaaaaa 120
 aaaccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaggggc cgcccaaaag gttcaaacct 180
 aagttacct tgaaggcaat ttaaaacccc ttcaaaaggg tcaccaaaat taatttcacg 240
 ggccgtcttt taaaaacttc ttaacgggaa aaacctgggg ttaaccaaat taaaccctt 300
 tgaaaaaat ccccttttcg caaatgggat taaaaccaa aaggcccaa ccattagcct 360
 ttcaaaaat ttgccaacct taaatggcaa atg 393

<210> 2075
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-H9
 <400> 2075

gtaccggtct acaattcccg ggtcgacggg ggaccagata gcgagcgcag ggaagggcga 60
 tggggacgaa gaagccgcag ctctccgcc tcgccgtcgt cgccgtcgcc gtcgcgccg 120
 tccttctgac cgcttcggcc aagaagtccg cggatgttac acagctccag atcggcgta 180
 agtacaagcc tgaatcatgt accctacaag ctcaaaagg cgacaagatt aaagtgcatt 240
 atcatgggac actcactgat ggatcagtat ttgactctag ctatgacaga ggtgatccct 300
 tcgaattcac tcttggaat gggcaggtga taaaaggttg ggaccaaggt ttactaggta 360

tgtgcgctcgg cgaaaagcgg aagctaagga taccgcgaaa gatgggttac ggggaacgag 420
gctccccacc aaag 434

<210> 2076
<211> 78
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-A12

<400> 2076

gaggcccaaa aggttccaag ctaagttagc ctgatggca agttcaaacc cctccaatag 60
ggtcacctaa attcaatt 78

<210> 2077
<211> 490
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-A6

<400> 2077

taccgatccg aaattcgcgg gtcgacgggt agcggcgcg ggaagcaggc ctgacggcg 60
gcgaggggt tgagagtaag caacagcgac ctgtccact tggcgaaatg ccttggtact 120
acaacgttga tgacatcctc atggaggagg agcttatttc ggttggtttc caagtaactg 180
caaatggcgt tggtatgcta gatcctggcg tcgagagaaa cagtgttgaa aagggtgcta 240
aggtagacct tccatthttg cttgctcatg ggatgctgtc tctggaacaa gcggtgtcga 300
taaatgtacc tccttgcttc acccagaaaa ctggaagga gatccaagct gatgcagcct 360
gtgttgattt gagggttcgg tgcccttact tttatgagct aggatgcaag attgttctc 420
tggtgggtga caagagcatc ggccagttct tgcgctacgc gttcaccagt aggtacaagg 480
aggtactaag 490

<210> 2078
<211> 465
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-A8

<400> 2078

taccgatccg aaattcgcg gtcgacggga ggccacttcc cgccgactct caggtatgct 60
acctcttttc gatccatacc cttgttcgat tgccccatct gccatgtcgc tgcattgtgga 120
tctttttcca ctccaccatc taccgaattt gctatcctct gctctgctgg tcacgcagat 180
gaaaacttta atttgcgcta ttaaaggaaa ccctacttca tgcagactaa tccatgtctg 240
ggttgaataa ggaaaggaag ggagactgta ctgtccaaga gtgtacgcat cgaacccgca 300
tctaggttga aaaggggaaa atcaatagct aaggaacgag tctcgtgtct cttgggttaa 360
gaagggtaga aaggcatgac aacgcaatag agaatgacca ggtcgattgg tttgttgtcc 420
tcacatagga aaaacgtggc taaacataac aaaattggga cataa 465

<210> 2079

<211> 86

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-B12

<400> 2079

ctctagaggg ttcaaacctg ccttcgcggg gaagccaagt cataactcct ccaatgcggc 60
acctggattc aaattaatgg gcggcc 86

<210> 2080

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-B6

<400> 2080

ttcgcgggtc cacgggggtg aggacagtga cgagggcgat gactactaga gctgctctcc 60
tggtgctttc ccaaggcatg ctgctgcaat cctatgatct gcccgagtgg ctttatctgt 120
tatctgtctg tttgaacatt tgctttgtgg tgtttgtttt acaacctgtt gtgttgtgaag 180
aacctgtat gtttgaacct gttatgcacc ttggttaata tgcattgctaa aaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
aggaaaaaaa aaaaaaaaaa aaaaaaaaaa aaagcgcccg ccaaaaaggt tccaagctta 360

cttacccttg aatgcaactt caaaccctt caaaagtgtc accaaaattc aattcacggg 420
ccttcgtttt aaaac 435

<210> 2081
<211> 423
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-C12

<400> 2081

gtcgacgggc cccggaagac atcgaatctt tcatcaacaa gtatcggaag gtttcggat 60
cctttccgtc cgtgcaaaag gtgaaatcct tggaccgcct ttggcattaa gtttcaattt 120
tcctttaagg cacaatgagg gtatgaaaaa gtccctgggt tgagttaaca gaatgctcat 180
tgcacttcac ctaaattctt tgagtatggc tttatacaat gttcatgtg cttcacttat 240
atcatttgaa gtttggattg cctgtttctc ttcacataga aaatcgccat ttgtaaaatg 300
ctcttaagct tcaattatat ttgtgagagc gtggcatata ttctgtagaa ataattaaac 360
tctcttgctt cagttatatc taattagaga gatgacacga attgggtcaaa cacatggtta 420
gtc 423

<210> 2082
<211> 446
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-C5

<400> 2082

ggtcacggg tcaagctaga taggggtggt atgaaaaatg cctgggggtg aggtgtgtga 60
ttcccgtagc atgcacgtat ggtgaaccgc tttgtgatga agttggagca caattttatt 120
tattgattgt cttccttatg agtggcggtc ggggacgagc gatgggtctt tcctaccaat 180
ctatccccct aggagcatgc gcgtagtgct tggtttttga tgacttctag atttttgcaa 240
taagtatatg agttcttttg actaatgttg agtcacgga ttatgcgcac ttccaccatt 300
gctagcatct cttgtgccgc acaacttttg ccggtacat acaccaccca tgtaccttc 360
ccaaaacaag caccatacct acctattatg gcatttccat agtcattccg aagattatat 420

tggcattgcaa cttttcaacc gttccg

446

<210> 2083
<211> 471
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-051-Q1-E1-C8

<400> 2083

ctgcccgtac ggtccgaaaa ttccgggtcg acgggtccag agaagctcaa ctcattectc 60
atgggtacgtg cgcattcagac cacataggat gtgggtgaaa catgcctttt cgttcaattg 120
atttttctca cagccccaga ttatgtgttg tctttgtgtt ccttctctgc atgatgtcaa 180
cttgtcaagt gccacggctg cttcaacatg tgcgttggtta aaccttgctg agggaggcgg 240
tgggcactgg tgggtgcaag ccgattcctc acaagggtct ctccatgctg ctacgctctc 300
ccgtcgggtct cttcttgctt tcgctcaggc aggcgccgac ggggctgaca cgccgttgaa 360
tcagcgacgg acagcgtggc gacgcagggt tgtgaggagt ctccgtccgc tacaggctac 420
agcctcaggg gacgaagcan acacatattg ggagtcttca tgtgtgcaga a 471

<210> 2084
<211> 427
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-051-Q1-E1-D3

<400> 2084

ggtcgcacgg gctagggttt agcctctatg atctcatggt agatcaactc ttgtaatacc 60
catatcatcg agatcaatca agcaggacgt aggggtattac ctccatcaag aggtcccga 120
cctgggtaaa catcgtgtcc cctgtctcct gttaccatcc gccttagagg cacagttcgg 180
gccccctacc cgagatccac cggttttgac accgacgatg agaaacgtcc atctctagta 240
ctggatgacg cggctctaat aggcctctccg gcatgggtgga ggatgggtcgg gatggatggg 300
gtggagaacg gtggcgatgg atgggggtggc ggatggagga ggctgggtgtg gggatgggtg 360
tctagcacgg atgggtgtatg aatgggaaaa tgtanggaga ggtatgggga accaagtttt 420

tgggaca

427

<210> 2085
<211> 482
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-D5

<400> 2085

taccagtccg aaattcccgg gtccacgggg aagtccgccg ccaaggaggg cggcgacaag 60
aagggaaga agaaggccaa gaagagcgtg gagacgtaca agatctacat cttcaagggtg 120
ctgaagcagg ttcaccccga catcggtatc tctccaagg ccatgtocat catgaactcc 180
ttcatcaacg acatcttcga gaagctcgcc ggcgaggccg ccaagctggc gcggtacaac 240
aagaagccca ccatcacgtc ccgggagatc cagacctccg tccgcctcgt cctccccggc 300
gagctcgcca agcacgccgt ctccgagggc accaaggccg tcaccaagtt cacctcctcg 360
tagagtgtc ctgctcctgt gtctcgtagt tagctgtccg ggtgtgtttg tggccgtgta 420
atcgtgtaag aatcgacccg tgatgtttct ggatctcgag aaatagtaac ggtgcctgcc 480
tc 482

<210> 2086
<211> 334
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-D6

<400> 2086

ttcccgggtc cacgggtatc agcacatccg gcaagttctg cagggccaca agaggccgat 60
ggtgatggca acgtgatcag ccagccagca gcctgctgga tctctttctc tctggatgcc 120
taaagtcagt atgtcaatgt aatgtaaaca tccctttccc cttccccttt cttcatgtag 180
cttcggtcta ctcttagga gtcttggtaa agcttggtct ctgtagttgc ttcagctact 240
ggtaccgtct attgtgtgtg atgtaataata ttctggacca ttatgccatt cttttttcaa 300
tcaaaaaaaaa aaaaaaaaaa aaaaaaata taat 334

<210> 2087

<211> 438
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-051-Q1-E1-D8

 <400> 2087

 taccgatccg gaaattccgg gtcgacggga gcaaggccat atcagataaa ggcagatgga 60
 gctttcggag gaggtctaca aggcaccgag ttctcaagaa ctctgatata tccgagcctg 120
 aaactctaag ttcgagcaaa gcaaaagctg atgttgetcc aagcaacaac gtctactctt 180
 caacatactc ttatgcctca gagaagcccc tgcactctaga gaagccagac gagaagattg 240
 tgcttcaaga gaagccagat gagaagtccc tactcgaaga gaagcccgat gaaaagcaga 300
 cagagaagac aactgaaaag ccagtggacc agataattga aaggtaatt gaacagccag 360
 atgaaaagat aaccgagacg ccgagtgaag agccagctga aaggatatct gaaaaaccag 420
 ttgaagagcc agctgaaa 438

<210> 2088
 <211> 458
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-051-Q1-E1-E2

 <400> 2088

 ggtccgaaat tcacgggtcg acgggatctg ggatgtattc cgcagccaaa atgcggtaga 60
 ctttgcacgc angaggcttc aagagcacia tgacctgtc gcctgctgta aagagttggt 120
 cgatgaggcc atcaagagga agagcggcga caacctttcc gtagttgtcg tctgcctcaa 180
 ctccatagcg cctcctgtct taacagctcc caggcctcgc gtgcagagaa gtatatccgc 240
 agaaggcttg agggagctgc agggcttcc ctagagcttg gcggactgat atgtgtggct 300
 tgagaaccct ggcagggtgc agcgtgtag taatcccatt tttccatagc ctagcttgga 360
 atttaggttt agtatgtgcc ccatctcata acctgagatg gttgttggtg agtaatgcat 420
 cactgtaaca tattatgcgg ctaattttat ctgcacct 458

<210> 2089
 <211> 390

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-E3
 <400> 2089
 ggtccacggg gttgctgtaa ttgttgcgtg tgctgttgct attgttggtg ttgctgttgt 60
 tgttgttgtt gctgttggtg ttgttcagc tggtgttgct gttgttggtg ttgatgttgt 120
 tgttgttgc gttgctgctg ctgttgcgtg tgctgctggt gctgctgctg ttgctgctgc 180
 tgctgctgct gctgttggtg ttggtgttgt tggtgttgtt gttgttggtg ttgttaatgt 240
 tgttgttgtt cttaatgttg ttgttgttgc tggtgctaata gctgttgctg ttgctgttgt 300
 atgatgctgt tgctcttact gttgcagttg ttgttgcgtg agttgatgct actaatcct 360
 gtaactgttg cagttgcaat tggtgttgc 390

<210> 2090
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-E4
 <400> 2090
 cacgggtcca cgggacctt atgataagag gatctcccag gaggtatttg gtgatctcct 60
 tgggtaggaa ttcaagggtt atatcttcaa gatcatgggt ggatgtgata agcagggtt 120
 cccaatgaag caaggagtgc taacttctgg gcgtgtccgc cttctgcttc acagaggcac 180
 accttgcttc cgtgggtttg gcaggcgtaa tgggtgagcg aggaggaagt ccgtccgtgg 240
 ttgcattgtc agccaagacc tatcagttat caacttgggt attgtcaaga aggggtgagaa 300
 tgatctgcca ggccttaccg aactgagaa gccaggatg aggggacca agagggttc 360
 caagatcaag aagctcttca accttggtgaa ggatgatgat gtccgcagct atgtcaacac 420
 ataccgcagg accttcctta a 441

<210> 2091
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-E5

<400> 2091

gggtcgacgg ggcagagacc atctgggctt tattatggag gtgccctact cctcctaagg 60
 tgcgtgtgtt cgcgtggtga ctcatcactg attcccttcc aacatgggtt aataagaagc 120
 gtcgtaattt ggaggtatct gacgtgtgcc cgggtgtgtgc gtctgaaccc gaggacacat 180
 accacgcgtt ctgcagggtcc ccacgagcag taggtctctg gcaggccatg gcgagcgact 240
 ggagggtccc ggacgtccgc aagctggtga atcctggacc ggagtggctc ctgcacatcc 300
 ttggggacag tacagagacg gaacggcttc acctgcttat gactctgtgg cgcagctggc 360
 atgtaaggaa tgatatagtt caccataaac ggcctcccac cgttgagtca tcgaagcgct 420
 tccttcatag ctatg 435

<210> 2092

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-E6

<400> 2092

ttcccgggtc cacggggacc aaaaaaac ttaggatttc ttattgtact gattgaactc 60
 gacaaattct tgccctgcat aagcaaagga aaagaactag gcctgtcgat actggatttt 120
 accatagttc tagttctaaa aaagactgtc aatttcttct taaaaatagg gctctggcag 180
 ggttctgggt agtggcccaa accgatacca atagggatga gggatatata cttatgaatt 240
 tcataattga ttctattccg caattcataa ctacgaaagt aagaggtcgg aaatcttttt 300
 atccaaaggt ccctaaagga cattcctttt ttgctcctag gattgaagaa gagattatac 360
 gaaagactat caagacttcc taattatctg acactaccta cactaaagta aggtctactg 420
 actctgtctg gaattagatt ggat 444

<210> 2093

<211> 459

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-051-Q1-E1-E7

<400> 2093

taccagtccg aaattcncgg gtcgacgggg tgtgacggag ccctgccgga gggtcctgga 60
 ggtggggcag caggccagcg gtggaggagc ttggggcgcg gacatggatg tctgactgcg 120
 aggccatgag aggcacatcg agaagggtgt gtctcctggc gcgtgcgggg atggaaggag 180
 cggcgcgagg acggcagagg catggtgcct cgctcctctc cctggcgaag cagggaaagga 240
 ggggatcgag ggagagggcg ctgcgagcga gagagaggaa ggtgcagggtg gtttgacac 300
 gggagcgaga ggtgggggtt cgaacgagtgt gtgaggagg gatcgagcga atggagatgg 360
 agatcgggcc tctcatggcg gcgctggtgg gaggacgaag ggaaggagtg ggaatcgggc 420
 taggttagaa ttataggtac ttgggccggg ggagtgggc 459

<210> 2094

<211> 451

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-E8

<400> 2094

gggtcgacac gtggcacggc ccaacagagg cccattcctg tgaaaaggcc gaccatttg 60
 acttggtcaa aatttggcgg gtcggcccat ggaaagcctg ttaacggcct gttcgcatat 120
 agcccattha caaccgcta acccaaggcc cgttatgcc tatccgaatt aggccagta 180
 gcgtcatcta ggccatccaa tatgattcca tcccattttc acttctggcc catgtatggc 240
 ccatgacgtc ttctggccca tatgaggccc tatgtgactc ttggcctggt aacggcccg 300
 ggtgaaactg gcccgtaatg aatagtgtat cactttacac ccattaacgg cccgtggtga 360
 aactggcccg taatgaaccg tgtatcactt tataccatt aacggcccg aatccaattg 420
 gccgtttcaa gcccatgtta cctttcggcc t 451

<210> 2095

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-F2

<400> 2095

cacgggtcca cgggatcagt ggcacgctg acttttgggtg cttttgttgg tgagggctcc 60
acatttgctt cagccatgac agcgccagtg gcttcagtgg tgttggtggg ggcagccgca 120
agattttcaa cctccacttg acgagctgga gggttgctta cgatcacgtt ctccctcgaga 180
actgcttctt ggtgggacag gggagtagca gcttgtggta gttcttcttc atcggctgat 240
gtagccggaa tgtcttcagc agtttttagct tcagacgtag agacttgagg ccttggacct 300
ttgtgaagcc tgcgcaacgc gggcgacgca tgtggagttt gtgttggtg ggccttagag 360
tcttcttcct cttgtgggtg atccgcccac gaagcatcct gtgctattgg tgtcagtgga 420
cgaccaatgc tgatgagttc acta 444

<210> 2096
<211> 392
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-051-Q1-E1-F8
<400> 2096

gggtcgacgg gcctctaata ttttgccgaa ctgagagtga tagtcccatg gagaatgggt 60
atgctcgctc tgtcgaaggg atccatgttg ttgttgatat gcagaataat attgtcatag 120
agtttgaaga caggaagttt gttcctctgc cccaccaga tcatttgaga aactacactc 180
ctggagaaac tagagggtgt gttgatcgaa gtgatgtgaa acctcttatt atcaatcagc 240
ctgagggccc aagcttccgt attaattggct attttgtgga atggcagaag tggaatttcc 300
gtattgggtc aacccccaaa aaggtttggg caaccaaccc ggtgccatat gttgatggaa 360
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<210> 2097
<211> 395
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-051-Q1-E1-G2
<400> 2097

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attgttggtg ccaatgcctt tgctcatgaa agtgggaattc atcaggatgg gatgcttaaa 180
 tttaaaggaa cttatgagat aatatcgcct gatgatattg gtttaacacg tgcaaatgag 240
 tttggtattg ttcttgggaa gctcagtgga aggcattgctg tcagaaacaa actagtggag 300
 cttggatatg aaatcaatga caaagaattt gaggatttcc ttaaacgcta caaagaggtt 360
 tcagagaaaa agaagcgtgt aactgatgaa gacat 395

<210> 2098
 <211> 478
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-G3

<400> 2098

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 aacctaaatc cggaccagat tgcacgcgcc gaggatgtgt ggatggaccc tgccccgcag 180
 gccgcacact catcggcggt agagccgaac ataggcctta cctctaagga agcctatgac 240
 tccagtcccc cggactcgta tccggctata ggttccagtc cacgcgctcc cgagcccgtc 300
 gagcctgggt gggctccggt aacggagttt atcgtgcggg atatcttcca gcaactcgccc 360
 cttggcgatg tgctgaactc gttaaaatct ctctctttgt caggagactc atggccgaac 420
 tatgtccggc tcgagtggga agcatgcat gaaggaaatt cgttgcccac cccacaac 478

<210> 2099
 <211> 465
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-051-Q1-E1-G8

<400> 2099

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 tctggaaggg gttgggtgct gaagtagatc tattttatag gaaagaactt cctctaaggg 180
 gttttgatga tgagatgaga acagttgttg caagtaacct tgaaggaagg ggaatccgat 240

tgcattccagg gacaaatttg accgagttga gtaaaacagc cgatggcatt aaagttgtga 300
 cagataaggg ggatgagctc attgcagatg ttgttctttt tgctacaggt cgtgcgccga 360
 actccaatag gctgaacctg gaagctgttg gtgttgaggt tgatcaaata ngagccatca 420
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<210> 2100
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-051-Q1-E1-G9

<400> 2100

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 aacgacatcg agctcgtctc ccgctccgcc gccctcatca accagaaatg ccatgtcaag 120
 aacaaggata tcangaagtt cttggacggc atctacgtca gcgacaaggg cgccatcaag 180
 gaggagtaga gagccggaaa ccgtcccgcc caccagaagc cgtgtttctg cctgccgtgt 240
 ttgtttcatc gtgtttgtgt ctgtctgtcg tcgtcgtctt cgtgattttg aactttctct 300
 agactgaatt ttgtagcgga gttaaatttt tagggatgtg ccgtggaaca tgctatcttt 360
 attgttatcc tgcatacgt cgcccgcgcg agaaccggtg 400

<210> 2101
 <211> 465
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-H5

<400> 2101

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 atttgccctt tctttcccaa tcttctctct tctctttcgc ttgctttctt ctccctcgt 180
 tttgtttgcc gttatgtcga aaattgggga gattatcgtc gagatggaca ataatgataa 240
 catggaaaat tccgatgctc cggctgaaga agcccctatc ttgcatacaa taaattcgaa 300

tcggtcgtgg taacattatt ggtaaagggtg gtattcaaaa tttctttact tgtgtcggtg 360
 ctttaccttc catgggtggt tctattcttc atagaactag tagtcctgca gatgctatcg 420
 ctatgcttgt agttgaactt gaaagacaat ttatgcagta tgcatt 465

<210> 2102
 <211> 468
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-H6
 <400> 2102

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 gttatggtgc cagtttgcgt aagcagatca agaagatgga ggtgtctcag cactccaagt 120
 acttctgtga gttctgtggg aagtttgcgt tgaagaggaa agcagttgga atttggggat 180
 gcaaggactg tgggaagggtg aaggctggcg gtgcttacac tatgaacact gccagtgcgg 240
 tcactgtcag gagcactatc cgtcgtttga gggagcagac tgaagcataa gttgctacta 300
 gtgttttgc ctagtgaatc atctgggatt tcgcagttta gacgatactt tggattcagt 360
 tccattggct gtttagtcaa ggattatctt tgtacttggg gcgatgatgt tctgttatgt 420
 tattctccca accttttgtt gcctgattcc actctgattt actggtgg 468

<210> 2103
 <211> 458
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-051-Q1-E1-H7
 <400> 2103

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 gcggcagaat cggttgtggg gtgtcaggat ggttggtagc tgaaccctca atgacacggc 180
 agaccacact aaaacctcca gccaatgtag atcctatgca agattttgac ctgtggctct 240
 gccgaaaaca acggcgacaa cgcgtctgat tgggtgcaact ggaggtgata tgtgccattg 300
 aaaaacaatt gtggcatttc caaactttga atgccatttg atcaaccata gaagaaaatc 360

catcccaatc ttcaaacgaa tggcccaaaa tcccaggggtg tgataattcg cgatcctgac 420
 tgacttactg cgcattggga gattcaacat tgactggg 458

<210> 2104
 <211> 466
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-A10

<400> 2104

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 tgcggttttg gctcgagcgg cctccgcttg ttggctgcct cgcggtccat ctcaaccggc 120
 agagacgccg gtgtacacgt gtgctagtgt gtgttgtgtg ctgggtgtgc gtgagtgcgt 180
 ctttctgtgc atgccgccgc acagtgggtga attgtgcgcg agtgcgtcct tagcgcgcaa 240
 gaagtttgtc ctcaatgcgc cctcaattta ctagcatgcg ggggtgctacc ccgagtgggt 300
 tcaactttgt ttccttcacc gcgtgtcaga tgggcctcta gtttacttat ttccaccac 360
 tgccacatgg gccagcacac cangatacag aacacaagct gacaacgcag catgtggatt 420
 gggtgaccgg tcaactgaac aatatacaga gctatacgct gacaca 466

<210> 2105
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-A12

<400> 2105

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 ttgttgtgaa ctgggctggg aggttgctgt aacttatgtg tgccctgaagc tttgtgcttg 180
 cacctgcacg tgatgatccg agtgacgcag aaacgggtact gtaactgcat catatgttta 240
 tgggtgtggat cgcctttggg gtgtactcca gagacaatgt tgcatagaact gtcataggaa 300
 aagtaaaaca ttgcggtgta atactacatt tcccatgctg ctttaagtct gtttattact 360

tttagttcgt gtaagctgcg gtgccagtga ggtgtcttgt atgttggcta gatagagtga 420
gatcgcctcat tgttgggctt 440

<210> 2106
<211> 366
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-B12

<400> 2106

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agtcctgggt gccaatcata tcacctgggc tggaagtttt gttgtacttt tggctctgtag 120
catcagtgtc gtaaacaatg caatgatgca tgttttggct cattgttgat ttcagcttaa 180
tgcttattgt ttgtactacc taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa aaaccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaagcggc cgcccaaaag 300
gttcaaagct tacgtaccct tgaatgcaac gtcatacccc ttcaaagtgt tcaccaaatt 360
tcattt 366

<210> 2107
<211> 474
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-052-Q1-E1-B8

<400> 2107

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gcggggaagt ccgccgcaa ggaggcgggc gacaagaagg gcaagaagaa ggccaagaag 120
agcgtggaga cgtacaagat ctacatcttc aagggtgctga agcaggttca ccccgacatc 180
ggcatctcct ccaaggccat gtccatcatg aactccttca tcaacgacat ctctgagaag 240
ctcgccggcg aggcgcgcaa gctggcgcgg tacaacaaga agcccacat cactgcccgg 300
gagatccaga cctcgtccg cctcgtcctc cccggcgagc tcgccaagca cgccgtctcc 360
gangggcaca aggcggtcac caagttcacc tcctcgtaaa gtgcccctgc tcctgtgtct 420
cgtagttagc tgtccgggtg tgtttgtggc cgtgtaatcg tgtaagaatc gcac 474

<210> 2108
 <211> 440
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-052-Q1-E1-D10

 <400> 2108

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aggtttaaca caaatatgaa tttagaatga gttcattaca gtacctaagt ggtgatttat  120
tttcttatac taacggagct tacgagtttt gtgtggttga agttttcatg ttttgggtag  180
agattcgatg gactatggaa taaggagtgg aaagagccta atcttgggga tgcccaaggc  240
agccccaagg taatattcaa ggacaaccaa gcaactaagc ttgggggatgc tccggaaggc  300
atccccctctt tcgtcttcgt tcatcggtaa ctttacttgg agctatattt ttattcgcca  360
catgatatgt gttttgcttg gagtgtcatt ttattttggt agtattttat ttctgttatt  420
tatattaatg ttttgcattct                                     440
  
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<210> 2109
 <211> 472
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-052-Q1-E1-D11

 <400> 2109

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gcaggaaaac acttgctgac aagtatgact atgtcatgca tggaaagctt tacaagattt  120
cagaggacaa ttccagcaag gataaaggac ctactaaagt ggagatctat gcatcttttg  180
goggcctcct gatgttgctc aaagggtgat cttcaagtgc tgctaacctc gagctggatc  240
aaaagctggt cctctcatc cgaaagggtg aaacgtgtca tctacctgat aaccagcgct  300
tgtagttcac tcaaggctat accaagcctg tgatcgtttg gaggctaata gtcctacacc  360
cttatgtact cttttggcgg taatgcgact ctagattggt accatggctt ctctgtagca  420
ccagtcgctt attcctgttt ccctggagcg cattatgcgt gttactaact ta          472
  
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<210> 2110
 <211> 401
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-D6

<400> 2110

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cggccagtaa ctgcatggat ttaatttttt agacacttat tctgggttgc ccaaaaagggt   120
ggggttagaaa gaaagccatg tgaattagtt gtggcctgtg actgtgaggg agtggattag   180
caactgaacc tttgacactg ttgtttggca agaatgggag gagcgatcct ttgtttcaaa   240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa   300
ggaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaccggccg ctcaaaggga tccaagctta   360
cttacgcttg aatgcaactt caaacccctt caaaagtgtc a                               401

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<210> 2111
 <211> 473
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-D9

<400> 2111

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ggggaaagaa gggaaatgag aaggagaaaa gcacttccaa tagcaagggtg aaggcttcta   120
aagtaaagaa agaagaaacc ggttctgatg atgaatgcaa gccaaaatct cagaagagaa   180
gtccagctgc gggcaaacc aagatttcca agattaagaa accaaaagat gaatatgatg   240
atacaaagga ggaaaagaaa ataaagaagg aagttggtat caagaaagat gaaaagaagg   300
ctgctgggggt gaagaaggag aggaagggtg atgaattgcc agggcagaaa catgatcctc   360
ctcctgaaag ggatccattg aggatatttt atgaatcgct ctatgggcag gtgcccagata   420
gtgaaatggc tgcatttttg ttgatggaat ggggtttgct accgctggat gtg                               473

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<210> 2112
 <211> 476
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-E10

<400> 2112

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gtagttaga gaaagaaccc atttcatata tagaatagat agtgaaacaa actagtagga 180
aaaaaagaaa tggcaaagaa gcataccagt ctaacaccag cgtcaggat ttcaccttgg 240
acgagcctat attcatacat gaccagtcg gtccttgtag ccttggggcg cttgccagcg 300
tgaaacacca gggctctctt catcccaaca gtgcgatttt catacaccac ctgcctgtcc 360
tttccagtag ccttccagta gccaccttcg gttgaacggg tagctctatg cccaacagag 420
tactttctgc cacgggtgca aaagaagtac cactggagat ccccggtcgg cattga 476

<210> 2113

<211> 475

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-E12

<400> 2113

taaggtccga aattcccggg tccacgggaa gaagaagaag gacgcggaga acaccaaggt 60
catctacgcc cgcgccaagc agtacgccgg ggagtatgag gctcaggaca aggagctggt 120
gcaacttaag cgtgaggccc ggatgaaggg tgggttctat gtcagtcctg aggcaaagct 180
gctgtttgtc gtccgtatcc gtggtatcaa tgctatgcac ccaaagacca agaaggctctt 240
gcagcttttg cgtttgaggc agatttttaa tgggtgtgtc cttaagggtca acaaggccac 300
cattaacatg ctgcgtcggg ttgagccata tgttgcttac gggtagcccta acctcaagag 360
tgtcaggag ctgatctaca agagagggtta cggaaagctc aacaagcaaa ggattcctct 420
gaccaacaac aaagtcattg aggaggggtt ggggaagcac aacatcatct gcac 475

<210> 2114

<211> 467

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-052-Q1-E1-E7

<400> 2114

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gagtagtatt agcaatgtgg gaaatgttga tgcttttgat tatectcatg aagaacctac 120
tattttacac actaaaaagt ttcggattgg tagtggaat attattggaa aaggagtat 180
tcaagatttc tttacttgcg ccgatgcttt gccactatg ggcgggtcta ttcttcataa 240
aactagtagt cttgcagatg ctatatcttt gctcgtgggt gaacttgaaa gacaatttat 300
ccacatgcat ccttgcatat agaggatttt tctagatttt ccaatattga gcattcttct 360
gttaagcgag cagctaccat ctttttagct catgagttca gatttataat aaaagaggcg 420
aacggaattt ttgcacatta tanggtggat ngccgacatc ctcccat 467

<210> 2115

<211> 460

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-F10

<400> 2115

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aacagttctt agtaaaattg agatctcttg gatcaggga agctgctttt acctttattc 180
ttgatgatgc ttctggtaac agcttcatcg agaaccgaa tgcaccttca tcagatcctt 240
tgttatcttt gagattctat gagaggacat atgaacaaca agcagcactc ggttttcttg 300
ctgaaccaac caaagaatct ggagactctt ctcaggatgc ttcaacagtg gaaggaaact 360
ctggtgggcc gcaaaggatt ccacatgggt cagttggagc tgttgcaggt cgccgtgcta 420
tagctcaggg aaactctgat gaaattacta cagcactgtg 460

<210> 2116

<211> 329

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-F11

<400> 2116

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gtgcagctct taatattctg taattctcta taatcacgtc aagatgcgtt aacgtttact 180
cctgatgatt actctgattt gaccgtcatc tataatgata ctgcaacttc attaaatgat 240
tagatatgtc tgacattcta taagttgatc tagtaacaat ttcaagcact aggtcgtcat 300
ccgtagccaa atcaacaatt tacagattc 329

<210> 2117

<211> 447

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-F6

<400> 2117

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ctgcgtgtga attaagagag gtttaagggtt tatcttttaa aaaaaaaaaa aaaaaaaaaa 180
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagggggccc cccaaagggg 300
tcaaacttaa tttacccttc aaggaaattt aaaaccctc aaaagggttc cccaaattta 360
atttaagggg ccttttttta aaaatttcta aaggggaaaa ccccggtttt acccaattta 420
aacccttttg aaaaaaatcc ccttttc 447

<210> 2118

<211> 475

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-052-Q1-E1-F7

<400> 2118

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gtggctctgg ctggctctac accctcacga atggcacacc atactcgatt gatttggtat 180
cctctgggtg ctcgacctc gacctgtatg cccaccacct cgcctgactg ttgcctcggg 240
cgaatctgtc tgctccatcg cccagaggag atacttaatg aactcggagg accgcggcgt 300
gactcccgcc gaggagtaca tgtacattgc caccctcatc gccgtcttct tctctttcn 360
catacaatgc cacatggccc tcaccgtcct tgaaatctcc caccattgt caaatcaagt 420
aaggatatcc ttcaacctgg ctaactttgc ctgggtccgc cggcgatctg cctga 475

<210> 2119
<211> 468
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-052-Q1-E1-G10
<400> 2119

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ttttctattt ttttctgaca tttgtttga tttcataaat atattaaatc atttaatttc 180
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ttaatccaaa tggccaaaat aaatgtccat gagctcctaa aaatattgtt ttgattttta 360
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ttttatttgg gtcattttca aaaatgattc tgagggttcc accaatcc 468

<210> 2120
<211> 468
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-052-Q1-E1-G5
<400> 2120

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cgccaactac aagcagctca agaagggcgc caacgaagcg accaagactc tcaacagggg 180

aatatcggag ttcgtggtga tggcagctga cacggagccg ctcgaaatcc tcctccacct 240
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tgggcgtgct tgtggagtta ccaggccggt cattgcttgt tcagtgacca gcaacgaggg 360
tagccagctg aaacagccca ttcagagtct taaggatgct atcgagaagc ttctcatatg 420
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<210> 2121
<211> 470
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-052-Q1-E1-G6
<400> 2121

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gatataaaag aaacggtgcc aaggcagaat ctcacagagc gtagaaacag agacagacag 180
agagacagat ccaatcttgg aggggctctc gccatccagg gagaaggcca aggaagaaga 240
ggaagaagaa ggggggctct ctcacctca cttccggtgg cgccggaacg ccgtcggggg 300
ccatcatcat caccgcgac ttcaccaaca cctctgccat cttaccaat atctccatca 360
ccttcgccct tctatctata gcggtccact ctctcgcaac gcgctgtacc ctctacttga 420
acatggtgct ttatgcatca tactattatc caatgatgtg ttgccatcct 470

<210> 2122
<211> 336
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-052-Q1-E1-H1
<400> 2122

ttcaagggtc cacgggcatt ctaatagaat aaatcaatca gaaaaaaaga aaaaaaaaaa 60
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaagaat accaccaaaa 120
aaaaaaaaaa aaaaaaaaaa aaaaaagggg ccgccccaaa ggttcaaact taagtaacct 180
ttgaaggaaa cttaaaacct ctccaaaagg gccccaaaat tcaattcaag gggccgtctt 240

ttaaaaagtc ctaaacggga aaaacctggg gttaaccaa ttaaaccccc ttgaaaaaaa 300
 cccctttcc caaagtgggc taaaaaccaa aaaggc 336

<210> 2123
 <211> 454
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-H11

<400> 2123

tacaggtccg agattcccgg gtccacgggc attcaaatca tgcaagttag agtccaaaac 60
 aagggaaaaa gtgtttggaa aagtagatac gatggagacg tatcaactcc cccaagccta 120
 aacctttgct tgtcctcaag caattcagtt gacaaactga aagtataaaa gaaaaacatt 180
 taaaaactct gtttgcctc gttgttgtaa atatgtaaag ccagcattca agttttcagc 240
 aacgattatg aaccaaccat attcacaata acacttaggt ctacatttta ctcatatcaa 300
 tgacataatc aactagcgag caataataat aaatctcgga tgacaacact ttctcaaaac 360
 aatcataata tgatataaca agatgggtatc tcgctagccc tttttgagac cgcaaaacat 420
 aaatgcagaa caactccgaa gataaggact gact 454

<210> 2124
 <211> 498
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-H5

<400> 2124

tacaggtccg acattcncgg gtccacgggg gtgtagcaac acattcttct tctcttggtt 60
 cttcttcttg gtcacggct gatgcagccg gaatatcttc agcctctttg gtttcagatt 120
 cagagatggt cgagtagga gaggttcag gaaagacttc gcgtaaacg gattggcgct 180
 cttctccttg tagaacactt gacaaaagtg acctgtggcc ttggtccttt gcgaagcctg 240
 caaacgctg gcgacgccta tggagatgga gttggttggg cctcaaagtc ttcacgtca 300
 atcaccggag tggtagccta ggtcggggga gtaactggtg tttcttcac atgaggggat 360

tcttgaggggt gatcagccca tgagtcaccc tgagcaattg gaggcaatgg acgaccaatg 420
ctgatgaatt tgttggttcgt gagaacaagc catgatacca aattgtgctc gattcgagaa 480
aggacttcgt catcttca 498

<210> 2125
<211> 429
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-053-Q1-E1-A9
<400> 2125

tcccgggtcg acggggggcgg caaagagaac cggggctgaa aaggggctcc tctggaggct 60
gccggaggtc acctcaaggg agctcggcaa gatcggtccc gccttcgggc tcggcatcgg 120
ctgcggcgct ggcgcgggag tcggcttctt cggcgggtgca ggattagggt atggatttcc 180
tggactcact ttaggcttcg gaggttggagc tggctgcggt ataagatttg gttttgggta 240
tggcttgggc aaaggaattg ctcatgatga aaagagaaga cattcaaacg ttggtaaaat 300
gttcaggaa actccaaatc tgcctaagga taccattgct ggtttggttg acgagttggt 360
tgtaaacacc aaaaagcttg ccaccgcaac ttcaaacag attgaaaaat ggcaactgagc 420
tgcaccacc 429

<210> 2126
<211> 436
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-053-Q1-E1-B12
<400> 2126

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tgcctccatg aaacccgccc atgtggaagc cgataaaccc actctggaca cacggccggt 120
cgtgatcggg ccggcattaa acgcaacatc tgccgagctc ctcccgatg tcatctatct 180
aatctcctat ttaaatgatg ccaaatgccg gccagaatc acacacctcc accgctcccc 240
tatctcctcc ttcaccattt ttttccactc ttacaatggc ttactaagag tagttattcc 300
gcatccaagc tgggttgggtg gcccgccgag cccgccggat atgagatatg caactcactg 360

atccacctac ctcccctcgc ccgacggagc cagttgccgc cccaagccgg cgcgcggttc 420
aacaactcgc cgctcc 436

<210> 2127
<211> 363
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-B5

<400> 2127

cggggtaaac ccaatccaag cgggagccaa ctacgtgtca gcgcgtaaga cgagcgggcg 60
ttccaaagga tccaagcctt ggtacacgtg cgcgagacgg agtcgctcta ctttgctgac 120
agagatggcg cctcgaggcg ccgtagatag acaacataat tgttggtgta tcgccaattt 180
tacgaaatat accgtctgct gttcattttt ttctcgcctt gttgcgcctt tttttcaaca 240
tggtgtatga cttgacggct cgaaatagat agaactcttg atgtgggcct gtatttactt 300
gtgagattcg gtgttaccga gccggattag tagagcatgt tgccgtttat cggatcattt 360
ttc 363

<210> 2128
<211> 77
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-C12

<400> 2128

gggccctaga ccgatcaggc ttagataccc ttgcatgcaa cttcataccc cttcaaaatg 60
gtcaccaaaa ttcaatt 77

<210> 2129
<211> 452
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-E12

<400> 2129

attcacgggt cgacggcacc gggttttctg ttgaagtttt gtgtggatgg agtgtttgat 60

cgaggagggtc tcaatatgag gaaaaggaag agaggcaaga gctcaagctt ggggatgccc 120
aaggaaccgc aagtaaatat tcaaggagac tcaagcatct aagcttgga atgccccgga 180
aggcatcccc tctttgttga acaagtatcg gtatgttttc gtattcggtt cgttcatgcg 240
atatgtgcaa gtcttgagc atcttttgca tttagttttc acttttcttt tatgaaccat 300
gctggtatga gatagtcctt ggttgattta tagaacgctc attacacttc acttaaactc 360
tttgagtatg gctttataaa atgcttcatg tgcttcactt atatcatttg aagtttggat 420
tgctgtttc tcttcacata gaaaacagcc at 452

<210> 2130
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-H9

<400> 2130

gggtcgacgg cgtcaccata ttgcagtcg agaaggtaa ggatgagatc gtcctcgacg 60
gcaacgacat cgagctcgtc tcccgctccg ccgcctcat caaccagaaa tgccacgtca 120
agaacaagga tatcaggaag ttcttgagc gtatctacgt cagcgacaag ggcgccatca 180
aggaggagta gagtgcgaaa accgtcccag aagccgtgtt tctgcctgcc gtgtttcatc 240
gtctttgtgt cgtggttgtg attttgaact ttctctaaac tgaattttgt agtggagtta 300
attagggatg cgctatgcaa catgttatct ttattatcct acatattgtc accgtgagaa 360
ttggtacgat gcttagcttc ccctaaagg tgaatgactc aggttaattga acttaaaaca 420
agaaaaacca 430

<210> 2131
<211> 450
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-A10

<400> 2131

attccccgggt cgacgggctg gtgtagagag aaccttgaac tctcgcttc aggaagcgga 60
agcaaaagct gctgcctcag aagaaaagga gcggtctata agtgagagac tgtcacaaaa 120

tttatcccgccg ataactgttc tggagaccca gattacaatt cttaggacag aacagacaca 180
gctgagccga tctcttgaag aggagagaca aagagcatct gaaagtagac aggagtatct 240
agcaattaag gaggaggcag cattacaaga aggacgcgcg aaacagcttg aagaagaaat 300
aaaggagctt agagctagac acaaaaagga gctgcaagat gcagcagaac acagggggct 360
gcttgagacg gaccttgaag gggaaaaagc tgccagggca gaacttgaga aaacatcttc 420
ccgcgactta cctaaaattc catttccaga 450

<210> 2132
<211> 412
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-A12

<400> 2132

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tcgctagccc tttctgagac cgcaaaacat aaatgcagag cacctttaa gatcaaggac 120
tgactaaaca ttgtaattca tggtaaaaga gatccaatca tagtcatacc caatataaat 180
taaaagtaat ggatgcaaat gacagcgggtg ctctccagct ggtgcttttt aataagaggg 240
tgatgactca acataaaagt aaatagatag gcccttcgca gaggggaagaa gggatttgta 300
gaggtgccag agctcgattt tgaaatagag ataaataata ttttgagcgg catactttca 360
ttgtcaacat aacaaccaag agatggcgat atcttccatg ctacacacat ta 412

<210> 2133
<211> 447
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-B12

<400> 2133

attcccggtt cgacgggggg cgataaaagt aaagcagatg actacatcag aaccgggtaca 60
gggaagctgg gagctggaac ccagcaggcc tcgggtcttc cttgctgctt cagggagtgt 120
agctgctata aaattcgaga gcctctgtcg tgtcttctcc gagtgggcgg aagtccgagc 180
tgtggccacc aagtcacat tgcaactttgt tgatagatca tctctcccta ggcaggtcat 240

tctttacact gatgatgatg agtgggtctac ctggacgaag ataggagacg aggttctgca 300
catagagctg cggaagtggg cagacatcat ggtgatcgcc cccttatctg caaataccct 360
ggccaagatc gctgggtggg tatgcgacaa cctcctgacg tgcatagtgc gagcatggga 420
ctacaagaag ccgatcttcg tcgcgcc 447

<210> 2134
<211> 297
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-054-Q1-E1-B7
<400> 2134

ttatacgaat taaaccacat agtgtcctgg acgataatgc atatatcgct ggagaagcag 60
tagatgctcg agtggatgga atcgttacat aggcttctgc aggggtgtgac atctcagcta 120
tgatgaccag gagatgattc tattggacgg tcgtttataa gcttatcaat tggatgcac 180
agtcataact caacttacgc tccttgccgc aaatgggtact ttccgcagtt caccttgtag 240
cgagcaaggg aggagatata gacgtacgaa atatttatgc ttactaaata gctaatt 297

<210> 2135
<211> 435
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-054-Q1-E1-C10
<400> 2135

attcccgggt cgacgggtta tctgagttga caatatgtgt aaaatagtgc acatttatct 60
ccagattcag caattggaag gatgtccaac aaaatctcct gataatacaa gagaacataa 120
ggtgcaacgg agtagagtag atctccatt tataaaaaga aaaccatgtc aaactttaat 180
aacctttata gacgtgacat gtcttctctt tttcaagaaa aaaagtgagc atgtctttga 240
ggagagcaac taaaacgaag atcagggata cccggtgtta aagagagagt aaccgcactt 300
aagaaaagct actaacagac ctcaaaccat cactctggaa actgtgaatc ccgtggaaac 360
tactttattt tatcccaata agacagtttc aaacatgtgt agaaattatt gctagtgtgt 420
aagctggatg tcaac 435

<210> 2136
 <211> 458
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-C11

<400> 2136

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 ggcacaccag agcatcgcgg caacctttca cgtcttctct agctccggta aaccttctaa 120
 cctttcccct gcagatctgt tttaggggtt cacagttctt cagtattcat cgtctgcctc 180
 ttgctcatat gatagatctt tagatgaatc cgcaaactct tactctgtgc aatgatagtt 240
 gtttgacctt tgcctttact tatgcatctc aaaaccatag atctacatga acgtttttct 300
 cattggttcg gtactgctcc tttgaacctc taagtattta tctcttttct gaacttgctt 360
 cagatccaat gctataagga aatcttgtga aacctgtttc tgcgtacttg tccatccgca 420
 atgcttagat taggcgggtt aaccttatag aaaatttt 458

<210> 2137
 <211> 450
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-C12

<400> 2137

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 atcacacata cagatctcag tgcttaaggt cggcttcaat gaaacaaccc accatgtact 120
 cctacatggc ctctcatcga tacctttacc aaaacgcgtt caccacacca ctctcattac 180
 cgacatgatc atttactct agcccatcac ccagatgaac cagacctgac acgactctaa 240
 gcatagcagg catagcaagg taggaacaac acatacatat ggctcaatca actcctacac 300
 atgctagtgg gtttcatcta gttactgtgg caatgacagg tcatgcagag gaaatgggtt 360
 caactaccgt agcacatagc agcttgaaac gcgttgtctt aatgcagtaa aagagagcat 420
 gagcgagaac atgggattgt atcgatatga 450

<210> 2138

<211> 416
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-054-Q1-E1-C9

 <400> 2138

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 ggaaacaaac tcaatatagt taactgtggt acgcatgaaa cactaagtct tccatgcaaa 120
 aagtataaag caagaacaac ttggatataa accaagcatt tggattatac ttctaact 180
 catgagcatt ttcaaattca atcaatacat tagcgtgac catagatatt tcactatggg 240
 tataaccaat tatggcctta aggatcacta ggacaaggac gagagtcacg cattaattgg 300
 gcggattatc aggttatgga tatgctaatac aatcgatatac aatgagagga ttatggattt 360
 ccatgcaaca tatgcactac gatctatacg tgtacgatag atcacacaga aaacta 416

<210> 2139
 <211> 433
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-054-Q1-E1-D10

 <400> 2139

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 tcgtcgcggg ttttcgcggc ctcggtgtac gaatgggtgg gcggatggga tggcagtggg 120
 gaaccatggc ttagagacgc gcttgtccga aatgtgggggt aagttacgaa agtaccceca 180
 ccgatttgag gcggttcttt cggttcaggg gtaccacggg catttcgcgt gtcgggattt 240
 cacaggaggt gggagttttc gcgcgcgttg taatttcgga atagcaaggc gcggggttgag 300
 atggagggag ttgtcggagc acaacgagac aaagatatat cttaaattatt tcgggctaac 360
 aaggcgcgga ttgaagacgc gggagtttcg cagcatgata gacagagacg ctagcttgga 420
 ttttcggcat aac 433

<210> 2140
 <211> 451
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-D11

<400> 2140

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cttcagtcta ccaccctcaa actaatggtc aagtggaacg agcaaattggt ctaatcatga 120
gcggcatcaa acccagatta gtgcgggtccc tcacagaatc taacacgcgc gggatagagg 180
agctcgactc cgtactctgg gggctgcgga ccacacaaaa ccacacaacc ggattcacac 240
cattttttat ggtatacggc gctgaggcag ttttgcccag cgatataatt catgactcac 300
ctcgcgtgcg catgtacgag gaaagagaag ccgagttgga tcggcaggac agtttggacg 360
ctttagagga ggagcgcgac gtggcaaaat cccgttcgcg attctatcaa cagcaggctc 420
gaagatatca aagcagagaa gtacggggca a 451

<210> 2141

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-D12

<400> 2141

aattccccggg tcgacgggag atgctagata attgttctga gatatggagg tgataaatatc 60
aaagtcatgc ttgtagagta attgtgaatt tgagaagtgc ttgagttgaa gtttgcaagt 120
cccgtagcat gcacgtatgg taaacgtcat gtaacaaatt tgaaacatga ggtgttattt 180
gattgtcctc cttatgagtg gcggtcgggg acgagcgatg gtcttttctt accaatctat 240
cccctaggag catgcgcgta atgctttggt ttttgatggc ttgtagattt ttgcaataag 300
tatatgagtt ctttatgact aatgttgagt ccatggatta tacgcaactc cacccttcca 360
tcattgctag cctcttcggt accgtgcatt gccctttctc acattgagag ttggtgcaaa 420
cttcgccggt gcatccaaac cccgtgat 448

<210> 2142

<211> 451

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-E10

<400> 2142

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atttaggagg gtccggagggt ccggaataatg ttccaccacg atcaatacag cagaatgggc 120

tgtagggggg tgccctagcc ttaatgggccc aggggaccca gccccgcca ggcccatgcc 180

catgggagag gggaaaccct aaaggggagg gcctccactt gactttggag gcactcctcc 240

cccccttggc cgccgccccca accctagatg ggatctaagg ggccgggtccc cctctctccc 300

acctataatt agtggaggcg tgggagggca gccgcaccaa agttctggca cagccctccc 360

cctctcccaa gtctcctcc tctcccgcg tgcttgggca agccctgcag gattgccacg 420

ctcctccatc accaccacgc cgttgtgctg c 451

<210> 2143

<211> 445

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-054-Q1-E1-E11

<400> 2143

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gatggcaatg aggttttctt ccgcatcaag agatccacac agctgaagaa gctgatgaac 120

gcttactgcg accgtcagtc tgtggatctc aactccattg ctttcctttt tgatggctgt 180

aggctccgtg gtgagcagac ccctgatgag cttgagatgg aggaaggcga cgagatcgac 240

gccatgcttc accagaccgg aggggtgcttt cctggccctt agaaggagct tgctgcagcc 300

tggctgttct atgtcgtatg ctacctttag aactagagta aaatgtaaga agtgaaagaa 360

cttgtgaggc tatggttctg tgccatagcc tgangggggg tctggagggtg aaacaacatc 420

tgagtactgt tgatgtcgtg actga 445

<210> 2144

<211> 451

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-E8

<400> 2144

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ggatcataac acatagtagg tgaatacaga cttgtaagat aggatcaaga actcacatat 120
attcatgaaa acataatagg tttagatctg aaatcatggc actcggggccc tagtgacaag 180
cattaagcat agcaaagtca tagcaacatc aatctcagaa cataatggat actaaggatc 240
aaaccctaac aaaactaact tgattacatg ataaatctca tccaacccat caacgtccag 300
caagcctatg atggaattac tcacgcacgg cggtgagcgt catgaaattg gtgatggaag 360
atggctgatg atgacgacag cgacgaatcc cctctctcgg agccccgaac ggactccaga 420
tcagccctcc cgaaaagttt tagggattga c 451

<210> 2145
<211> 444
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-054-Q1-E1-F11
<400> 2145

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gcctcaggca ggcatgagc aggtgccccg gctggaccat gctgcagagt gcgccagggt 120
tgataagtta agggatcatg ttgcctaate tctctaata tgtggcacat ctggcgactt 180
caaatgacc acttttttga cagcgcaacc agagggtgca gacactgggtg gacacgatac 240
tcctggaggc aatactctgg atgatcgctg gtgcaaaggc gctgaggagg cagccacaac 300
atgcttgccc accagatggg ttttgagtag tttagctgta cagctcattt gtttcttttg 360
ttctgatattt ttttctttga gcttttggct gtaagtacta atacaaaatg atgtgcactt 420
taggtacata ttccacagaa aatg 444

<210> 2146
<211> 444
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-054-Q1-E1-F9
<400> 2146

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tcggagtcgg agtggagata gatatggacg tgacaggtac agagagaggg accatcatcg 120
tcgtagcagg agtcgtagca ctagtcctga tgattacaag aggcgtggca gagacagaag 180
tcctagtcgt agcaggagcc gcagctacag tcctgatgat gacaggaagg gtggcagaga 240
cagtttgctg cccgcacgca gaagcactag tcgctccctc cgcaagacac cacctcctcg 300
caagacacca cctccttgcg aggggtctcc tgctaagcgc aatgatgacc gttctcctgt 360
taggcgcaat gatgaccgtt ctctgttag gcgcaatgat gaccggtctc caggctctcg 420
tagcccttca acatgagctg aatg 444

<210> 2147
<211> 112
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-054-Q1-E1-G10
<400> 2147

attcccgggt cgacgggata ctctagagtg tcaccaaata atgctcctcg gaaaatatgt 60
ccatctgaca cagtatgata tcatagtatg tgggtcttga ctctgcagt ac 112

<210> 2148
<211> 442
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-054-Q1-E1-G11
<400> 2148

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gtaatagtaa ctcccaaagt ttggatgcag ggcaataggt tcctacctca tcaactactt 120
cccaatagcg acatgttatc aatcctactc atgcaatgtt tgagggtgaa actaatgcat 180
aaaaactggg tatgaaaggg atatgatcaa agtgtgaact tgccttgatg agttgatgaa 240
gatgattcgc actcaacact ctctcatagtt ctactcgtca cactccggtc aatctatcgt 300
aagcaagcaa tagtaaccac acataagcaa tcaactcaaaa gatcagaaaag aacgaagaat 360
acgattcggg aaacaacaaa accaagcaaa taactcttgc aacatagaac aatttctaac 420
agtacaaaaa ttgggtgaat tt 442

<210> 2149
 <211> 414
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-054-Q1-E1-G12

 <400> 2149

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 gtggagccac caggggctat atattagccc cactgtcaaa ctctctggc taagtgaag 180
 tgttaaagca ttatagtccg gttgcctagt tcgatgtgct atcacctcct taaaaggacc 240
 aagacgttgg attaagtgtg aatatgcac ttctgcgaac acccccgcac tataggcgtg 300
 ggggctgaag ccgacgactt caatctttca gggtatatac atgtatacat aaacggccgc 360
 acaggaggca tcacaatact ttccggcaaa agtataaata cagccttgat aaat 414

<210> 2150
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 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-054-Q1-E1-H1

 <400> 2150

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 gtcaataatg taccatgatt cttgtgctgt aaaaaataa gaacaaaaaa aaagaaaaag 180
 gaagatataa aaaaccggaa aaaaaaaca agaggatgct aaatcatgaa catgggtcaaa 240
 aaaaaaaaaa gcggctgccc aaaaggatca aaccttactt acgcttgcat gcaatgtcaa 300
 accccttcaa aattgtcacc aaatttcaat tc 332

<210> 2151
 <211> 412
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-054-Q1-E1-H11

<400> 2151

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accgctgct cctttcatgc ttcctgccgc agtgaacggg ctctactcca tgaggtgggt 180
atctcgggtg aagatgtgct ggtcacggtg gatttggtgg ccgtggtcga ttccatagaa 240
gacgtgcacc aaaggggtcgt ggacctccca aggggtgaaag gcgttggttc agacgacgag 300
acagattcaa tgatgtacat ctaagttagc tgtatgttga tccacgatat tctacattat 360
ctgttcagct gcaaacatta tgctaactca actgtgatca cgcattcagt tc 412

<210> 2152

<211> 398

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-054-Q1-E1-H9

<400> 2152

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acaaacctcc gacgccccaa aaagtatcca acgggtttgc gaataccgtg ctacctgtat 120
cactgaatgt tgaatcctca tcatttcgtg ctttacattt ctttcgcctc tctgccctat 180
gtttcgggtg gatacgtcag tggtagcgta tatggctgat atagggggga tgcttttata 240
atgttgatcc gtacgaccac attaaattgg ttcaatgtag gatctcatgt cttgaacagc 300
ctgtaacaat caacaacata cagatgctac atactgcagt agttggccag attcagtgtc 360
ggcacctggt gatataactt aatctgtatc cacgggtc 398

<210> 2153

<211> 227

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-A9

<400> 2153

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aaaatcatgc aggtcacgcg agcacagagt gtcaccgcct cagtgtttgc tatcacagac 120

gtcaggacgt cccccagacg ggtaccgtca tcatcgggcc tcaagcacct tacaaggaaa 180
 ggaaacacca acgggaacag caccatcatc tacgaagaaa acgcagt 227

<210> 2154
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-B6

<400> 2154

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 aagactgtca tcaccggcaa attcagtgcc agagcggcag gctaaccaat cagatgtggt 180
 cccagccagg accgctaact ggcattgtac cagtcattgc atcacatgag tctcgtttca 240
 ccatatccgg aggtgcgcaa cctcgggaat ctacgtggtg gatccgtcga gcaacggggg 300
 atgatcgtct tgctgcgata accttcccgg ggacgggtct agaggatgcc ctgcgactgc 360
 tgaggcctgg ctctgtccta attcttgcac cccgggggat ctactaattc tatagcagcc 420
 gccaa 425

<210> 2155
 <211> 425
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-C6

<400> 2155

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 gaaataagta ccaactactg aactgaaatg gacaggatat taagtacata tgaaggggtg 180
 aataacagag ttcttcgtgt cctacaagta gcatagcgct aatttattat tacaaccacc 240
 atgcctggta atagtagatt aaagagtgtc aaggtctctg ccctgtgcag agagagaggg 300
 agggagtga ggggggcctg gacctaacca tggtagtgac actgagaagt aatgacatct 360
 acatgagtgg ggtgacccaa gacaacaaaa attcatctat ggtgccattg tgtaaatgag 420

ttaca

425

<210> 2156
<211> 300
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-055-Q1-E1-C9

<400> 2156

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agcaggcagc agcacctaac gacagccaga gacgtgacca caggagagaa tcttgagac 180
ggcggcgccg cagacgatgc cgaggggaac ctggtgacgg ccatggtgcc ctccgacact 240
gggtacgcgg agagctcccc cggaaggagc aggcgcacag aggtccggat ctcacagccg 300

<210> 2157
<211> 165
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-D10

<400> 2157

ccctctctct atctctctcg ctctctctct ctctctatct ctctctctct ctctctccgt 60
gtcgaactcc tggaggaagg cggatacact aggggatgaa cgggcgccag agcgggtggag 120
atcgaggttg tgctccatct agtgagggtt aaattcaagg ttggt 165

<210> 2158
<211> 332
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-D3

<400> 2158

tattacaaca ccctatagtg agtcgtatta tgcaagattc acggttgaga tatttcagta 60
cagtcctcag gacacagata ttactacgg cgactttcaa tataaagtca atcctaaggg 120

ggcgtctcac cgtgcaggta ctggaacgca cagtcaaact acagtacaca tgcataataac 180
 ttgcaagcac tacagatctg gtcgaaaaac taatgcatgc tttaaacc acc atatctcgcc 240
 agttatatac acacaccaca ccagctagtt gttgcactgc aatcctgcac tgcacccaca 300
 gtcatgacgc atcaaccgta catcgacatc ac 332

<210> 2159

<211> 463

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-D6

<400> 2159

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 aatgtgcagc acagtggaca tatattacac aacattatat ggtgcactac aatgggttga 120
 atttggaat aagtaccaac tactgaactg aaatggacag gatattaagt acatatgaag 180
 ggtggaataa cagagttctt cgtgtcctac aagtagcata gcgctaattt attattacaa 240
 ccaccatgcc tggtaatagt agattaaaga gtgctaaggt ctctgccctg tgcagagaga 300
 gagggaggga gtgaaggggg gcctggacct aaccatggta gtgacactga gaagtaatga 360
 catctacatg agtgggggtga cccaagacaa caaaaattca tctatgggtc cattgtgtta 420
 atgagttaca caacaattgc ttggttaactc aaaagccttc ttt 463

<210> 2160

<211> 437

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-D7

<400> 2160

ccccacgagt attttttttt gtcttttttt gacaaaccaa acacccctcc aaactagccc 60
 tgtttatatt tttcggcaag gtaaaactgaa aacagatttt actaggggta catttattat 120
 agagtactcc aacagggggc gtgcagccgt gcaggcaatg gtacacagag ctagactgca 180
 ttactagtag tagtagcaag catgcattat tgtactggta aaatagctaa tgcttgcttt 240
 aacaacctag ctcgccagat atatacacia aacacaccag ctagctgttg cagtgcagta 300

ctgccctgcc cccacagtca tgactcatga gccgtagatg agatcacagc atgagcgtcc 360
actgctgggt gggactccca gtggcgggcg acacgatgac ttggctagcc tcgtgccgaa 420
ttcctgcaac ccggggg 437

<210> 2161
<211> 264
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-D8

<400> 2161

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agaattaacc caagcggaag catttcaata cattcactca gagagataga catacattta 120
tcactacata gatgacatgt ttccttaaca ggaagatgtc gatgagcaac tgagcatcac 180
gacgagatga aacacaggac aacttttcat ttcgagtaca ttattagtagt cgggctccta 240
gcatcgacgc gtttacttcg tgcc 264

<210> 2162
<211> 105
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-F7

<400> 2162

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gtagtagggg tcacttcaat tgtcatcatt ctctctatgg tgcag 105

<210> 2163
<211> 225
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-055-Q1-E1-G4

<400> 2163

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ttctaaagcg gccgccactg cggatgaact acatctatag ttcccgctat tgagggtcaa 120

tttcgatctt gtgctaata aggtcagatc agtttcaagc gtgaaattgt catgcgcaca 180
 caagtctcct gaataaatga gacagacgca tagattgtaa aatct 225

<210> 2164
 <211> 371
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-055-Q1-E1-H4

<400> 2164
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 cagtcaacaa caacgcatgg gcctacgcc ccaacttcgt ccccggaac taagctcaac 120
 ggctatgcta tgcaacttca ttgtctttcg gatcggagag ggtgtacgta cgtggattga 180
 ttgatgctgc gagatgcatg tgtgtctttt gtttcacgtt gcattgcata ggcaagtcga 240
 gatgatgagt tggcggttga cactaagatg aaccatgttt gtgcaatagt ggtgggtttt 300
 gtttctgct gggttaaaaa aaaaaaaaaa aactcgaaac tagctcgtgc cgaattcctg 360
 cancccgagg g 371

<210> 2165
 <211> 393
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-056-Q1-E1-A10
 <400> 2165

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 aagcaaaatc aagtgtggct cagagcacac caagagttgt tactgaagtt gtatttgccg 120
 cgccatcacc aagcctggct gaacagccgg ctgttgact gtcgcacatg tcgcagtctt 180
 tcaagaggag gttctcacia agatcttcaa cctactctgc aactgccagc acaaccggtc 240
 tgccgccgaa ggctgagtct actgctccat ctccactggg caggaggttg atgctcagtt 300
 ctacttctgg tggcatagat catgagtcac aagtgaaga gaaaagtagc aaggatgttg 360
 cactcaggtt tgggtgtaca gaagggactc ctg 393

<210> 2166
 <211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-056-Q1-E1-A6

 <400> 2166

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 gattcttggc tttgggatcc tgactttgca actgcttcaa agtatgtgat gagtcctcca 120
 atccgggaag cagggcataa taaagcactt caagctgctc tttcatcagg aatattacag 180
 cttgtgggaa ctgatcattg caccttcaat tccactcaga aagctttcgg ttctgatgat 240
 ttcaggaaga ttcccaatgg cgtaaattgt attgaagaaa ggatgcatat aatttgggat 300
 agcatggtgg agaccggcaa gatcacagtc accgattatg tgagagtgac aagcacagaa 360
 tgtgccaaga tcttcaacat ataccctcgc aaaggagcaa tcttc 405

<210> 2167
 <211> 417
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-056-Q1-E1-A7

 <400> 2167

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 cagctgcccc caccgccctc cgctccacc gaagcagcgc cgccaaccga cgccctccct 120
 ctcttctcgg tccgtccatc cctcgtegag ccaagctggg agtgctgggg ggatctcggg 180
 gatgttaatc ggcgaccaat cttcgggtga atcaagatag aaacaggttt tgatactgaa 240
 gtctggggga gtagtatact ctgtttgagt ataccattta gttttggaat aaaccacttc 300
 tccacatggc gggggctgaa tccgcactac ccgcagttga tcatgtggtg ttggataaca 360
 gcgatactga agtctcagag gtcgtggaat gcgattccac agttgtagaa gtgctgg 417

<210> 2168
 <211> 428
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-056-Q1-E1-A9

<400> 2168

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agtatgctct gcagaaaagc cttagacctc ccgatggcat ccttgaagat cttttcacgg 120
agccagatct tgaattcagc agattctcat tctgtgtctc ctccatgaca cccgacgac 180
cacagtctat gggcttgctc aggattacac ttgagaatcc ccatttggaa ggggaccaaa 240
aggatcagga gcctgcagcc gagaaggagg ctcaccagaa agctttccac ttatatgccg 300
ccatctctcg agagcaggcc aatcagctgc aactggcagg cgacgacgat cgaggtaggt 360
tagagttgct atgcaaggat cttactgtaa agctgatggg gtacgacagt acatgtgata 420
caggcaac 428

<210> 2169

<211> 449

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-056-Q1-E1-B12

<400> 2169

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atgcatctcc tgcaaaatct caaaagctaa tgggggatgc aatcagacca tgggctgctc 120
catcaaagcc caagtctgcc cccaaggttg ctgttcaagc cccaagaga tccaccagaa 180
acattgcacc agctgagaag aacaaggccc cagtgcctga agtggagaa gaagaagaag 240
ggcaagtgct tagaaagttg aagcccaaga ttcttgacca tgatgacacc catccagtgg 300
cataaaacac tacanaaaaa gacacatccg tgacattttg ggctgaacga aatttttttc 360
tgtcatacat atgacacttc tatgaagata attgtgacaa aaccgggtat catcatagat 420
gtggtgggct cctacttcta tgacaaaaa 449

<210> 2170

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-B7

<400> 2170

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aattgttggt tttttgccta tttcagtgtt tcgaagaaac ggaatatcaa acggagtcca 120

aacagaataa aatcttcagg aacgtgattt tctcatcgaa cgtgatccag gagacttgga 180

ccctactcca agtaaaaaaa gaggcgggtca cgagggtggg ggcgccccct agggcacgcc 240

ccctgcctcg tgggcccctc gttgctcctc cggcgacttt cttcctccta tatatacaca 300

cgtacacca aacgattaga acaggagcca tatatctaata tccaccgccg caactttctg 360

tatccacggg atcgcatctt ggggcctgtt ccggagctcc gctggaagag ggccgtcatc 420

acggaggga 429

<210> 2171

<211> 375

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-B8

<400> 2171

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tgcttcaacc tatccattaa ggggcacgcg gagtgcgtga gattcatgag gtccttcaat 180

gttcgggtgt tgctgcttgg tgggtgggtt tataccataa gaaacgttgc acgatgttgg 240

tgctatgaga caggagttgc acttgggtcat gagctaactg acaggatgcc gttaaagtag 300

tattatgagt attttggccc agattatact cgtcatgttg caccatgtaa tatggagatc 360

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<210> 2172

<211> 447

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-C12

<400> 2172

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 cttactgcga ccgtcagtct gtggatctca actccattgc tttccttttt gatggtcgta 180
 ggctccgtgg tgagcagacc cctgatgagc ttgagatgga ggaaggcgac gagatcgacg 240
 ccatgcttca ccagaccgga ggggtgcttc ctggccctta gaaggagctt gctgcagcct 300
 ggctgttcta tgctgatgc tacctttaga actagagtaa aatgtaagaa gtgaaagaac 360
 ttgtgaggct atggttctgt gccatagcct gagggggggg ctggagggtga aacaacatcg 420
 gagtactgtt gatgtcgtga ctgaact 447

<210> 2173
 <211> 375
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-056-Q1-E1-C6
 <400> 2173

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 gtatatgata gtgtcgctag catccatag acagagaatc tggcccgaca tggctagtcg 120
 tgaacccaaa gtggcacaga catatgggga caggcataca tgaatcatat cgagcatgtc 180
 ggatcatcagc gactgaatcc gggctgtagc actgagctaa caggactcca tggaaccggg 240
 actgtagcag gctaggtagg actccggaag tcaccgcgtg acatttcccc gaaggacag 300
 acatacgaac gaagtgaac acatgccggc cagtcaagtg tcatgagcag tactgttggg 360
 ctagcacgac tccgg 375

<210> 2174
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-056-Q1-E1-D8
 <400> 2174

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 gacgagattt tcgagagcat ctgggtgggc gcggagctgg ccggccactg cacctcccg 180

gagccctcgc agcgggccgga catggggccac gccgtgacgg tgctcgtgcc catggtggag 240
aagtggaagc cgtccaacaa cgaggccgag gactacatgg gcatcgccct gcacctgccg 300
ctgctccaga tgggtgaaggg gtggcaggag tcggaggcga gcatgacgga cgggagcatc 360
atgagcctga gcctggaaga cagcaagggc agcatccccg ccc 403

<210> 2175
<211> 400
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-056-Q1-E1-E10
<400> 2175

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ttcctgctat gggaaaaggc ccgttggggc gatggagaga gggcggttcgc gctgttgga 180
gcatgcttg gtgttcgggc tggggctcct ctcgtcccga actaatcgt tcgatcgatg 240
cccagattcc ttccgaacga atcgttcggg gtggggaggt cccagaccga acgttcggcc 300
gttatcggcg tccttaataa gaattaaaca agaagcaaac cgtcacccgc ctgcttcgag 360
gattggtcgt gtctagccgc gtcttccac tcgcttgctg 400

<210> 2176
<211> 442
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-056-Q1-E1-E11
<400> 2176

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gcttgcccga aacaacgagt gcctccaact aacaacaatc ctaggggagt ttttttgcaa 180
ttattttgat ttgatttgag catggggctg ggcatcccag tgaccagcca ttttctcgtg 240
agtgaggagc ggagtccact cctcttgaga ataaccgcc tagcatggaa gatacagaca 300
accctagttg atacatgagc tgttcgagca taagaaacag aatgtttatt tgaaggttta 360

gagtttggca catacaaatt tacttggaat ggcaggtaga taccatatat aggaaggtat 420
 ggtggactca tatggaataa ct 442

<210> 2177
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-056-Q1-E1-E12
 <400> 2177

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 gatgcaaatc atttgcttcc gtatgatcgg gaggtcgtc gccagggctg ccctccagag 180
 cgacgatgtc gagctcgtc cgtcaacga cccctttatc accacctagt agatgacctt 240
 tatgttcacg tacgacacag ttcacagcca ttggaagcag actgacatct tccttacaga 300
 ggacatgatt ttacactttg gtgagaggca aattactgtc ttcagcatca tgaaccctga 360
 ggagatcacg tcccgttagg caggtgccga 390

<210> 2178
 <211> 431
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-056-Q1-E1-E6
 <400> 2178

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 gttggtttga gtgttctctc gtgttccctt tttatttttt cctcgtttc cctcctcgtg 180
 ttcacgcggg aatccgctcc tttcgtgaaa gatcggccga ttaggggtcc taccctacat 240
 catcttggtg tcaagagcca cgttgatcac gatttcggag cctccccgtt gatgaggact 300
 tcaataccat tgttacaccc acaaccctg ctgctataca tattggacca attactagag 360
 ctgcgcacg ccaactgaat tatcaggtac ttccgtntct tggtaatgat tctaattgtc 420
 atgagaatat g 431

<210> 2179
 <211> 409
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-E8

<400> 2179

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 tttcttaata gtggaatccg caagatgcaa gtttagagag caatcaacaa aattgcggaa 120
 atctcgcaaa tcacacaaag ttttggaat agtggagaca ctagcaccca aatcacacaa 180
 agcataaaac tcttgatctt taattttgat ttaatatgtt ggttccact catcatagag 240
 ttttctaggg atagaagctt tcaaatcaag tttttcttca taagattgca tcaaggcatc 300
 aacaatacgt tcggtaaagg ctttattttg actataagca cgtggagaat ttagcacgga 360
 ttgcaacaag gaaatacaat caattaaaga gcgactttaa taattaaat 409

<210> 2180
 <211> 411
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-F10

<400> 2180

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 gtccagccaa ctgaagacag aggagggcgc agaggtagtc gcggaacagg cctgctacct 120
 cccgtgcacc aatgacgggc tgccgggtcat cggggagatg cctgggggtga agggatgcta 180
 cgttgcaacc gggcacagct gctggggcat cctcaatgct cctgctaccg gtgcagcact 240
 cgccgagctc atccttgatg ggcaggccaa gattgttgat cttgtgccct tcagcccggc 300
 aagatttctc aagaagaaga gcaggcgcg agtgtaatgg catgcgcggt ttgtttcgat 360
 ctgatgttcc aaacttgga accgaataaa aagctatcct ctcttgctg t 411

<210> 2181
 <211> 437
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-056-Q1-E1-F11

<400> 2181

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tccgatgact ctaangcgaa ctctgccgc gaagacgagg aagagaaaaa agaggcttct 120
ccccacgagg ggggagagaa gaaaagaaag gcctcccaa ctggggaggc cggagggtcc 180
aagaaggga ggaaccttcc tccggactac tccaccaaca ccgacgacag tgaaggagg 240
tggtccaccga gggctaagcc cctggcgaca tcgtaagtgt ccagatacca gaataattca 300
tggcgttttg tttgtcgcat agaattcttct aacgccgaat acaaccctgc agcccgccca 360
aggacgggct cgacatttca acgagcggct ccctggctcc atcggacgtt aatagcactt 420
cacttctggg cgctcc 437

<210> 2182
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-F5

<400> 2182

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catagagtat tgtcccaaaa aaagagaaag gccaaaaaa gaaggggcca aataaaaaag 120
aaaggccaaa taaaaagggg aaaggccaaa taaaaataa aaaaataaat ataagggaaa 180
atgctactat ccttttacia cacttgtgtc tcaaagtagc accataatct tcatgataga 240
gagtctcttg ttttgtcact tccataaact agtgggaatt tttcattata gaacttggct 300
tgtatatcc aacaatgggc ctctcaagt gccctatgtc ttcgtgagaa agcaagttgg 360
attcacaacc acttagtttc tttgttgag ctttcat 397

<210> 2183
<211> 398
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-F7

<400> 2183

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aggttcaaga gatatgcgac gtgcagcacc ttgaggttgt accggaggag gaggaggctt 120
gaatgtgggc tgacgagttc caggcttggg tgtactggtg cgaacagcaa cataagcggg 180
ttcctcaatt tcttccaatt catcctcgta atcggattct tccatcgaag aggcgctagt 240
ggagctgcga ggggtgagcga cacgcttccg aggacgagcg cgctcctgcg aatcatcgga 300
cccaccacga cgagatggac gagagcccc agcggtgacc tgcttgcgag cagagcgctt 360
ttgtccatgg cattgctacc tagggaagga gaagactc 398

<210> 2184

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-G6

<400> 2184

cgggcaaaaa tcatggttaa gaaacatatt aagcaagggg aaggacaaac aggtgggatc 60
ttctcaattg aagctccact tcatgtttca aatgtacaag taattgatcc agtcaccggg 120
aaaccatgca agactacata caagtatttg ccagatggga ctaaagtaag ggtctctaga 180
ggaatgtatg cgtctggtgc tgtcatacct cggccagaaa ttttgaagga gagaaaaaag 240
ccgagacca catctcatgg cccaaaggac acaccaattg agcatgtgct ggagaagacc 300
tatgatgcca aagctggaat tggatgcct gatctatgag gagacgtcca ctgctgggag 360
tgaaagagag agagagttgg gcatatttgt gatctatatc catc 404

<210> 2185

<211> 380

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-G7

<400> 2185

attcgcgggg cgacgggtgg acttgactag ttgtgcttgc actggtagca ggaactagag 60
gtttttcttt attcataact ctctcaatt ttttttggct ttgaagtga tcatggttgt 120

ggacattatg tatgtggaga tatctgtgaa catgagttcg atgtggaagt tgaacttgga 180
atgtcgggct tgcacgtgaa ctataccatg tccaatgcta cgtttgttat tgtttggaaa 240
gtaattattg ttattacatg acccaaaaaa atttgtgcca catcagtaga tgcacggaca 300
tcacaacaga aatgctaact ggataaacat ttgaacctag ctactatgaa ggaaattctg 360
tattgacaac agtttttagat 380

<210> 2186
<211> 395
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-056-Q1-E1-G8
<400> 2186

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ggcaagacgg cgtccaagga ggccggcggc gagggcaaga cccggggccg caagaagggc 120
agcaaggcga agaagggcgt ggagacgtac aagatctaca tcttcaaggt gctgaagcag 180
gtgcaccctg acatcggcac ctctccaag gccatgtcca tcatgaactc cttcatcaac 240
gacatcttcg agaagctcgc cggggagtcc gccaagctgg cccgctacaa caagaagccc 300
accatcacct cccgggagat ccagacctcc gtccgcctcg tctccccgg ggagctcgcc 360
aagcacgccg tctccgaggg gcacaagggc gtcac 395

<210> 2187
<211> 385
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-056-Q1-E1-G9
<400> 2187

ttcacgggtc cacgggtgaa gaagacgcat cttgtcaagg ctgctccggc ggacaagtcg 60
ggagctgctg tgcgagaacg gacctgagct gtgtgcggtg gtgtcataag gagcctatcc 120
atctccacta gaattatccc aagtttcaact tcacatcgtg atgttgtttt acctttttcc 180
tgtcattgtc ctgctataac ggatagcgct ccctgttggc gccgccgccg gcgggggatgc 240
cctagtgggtg gaggggtgat gtcctcttcc gcgggggtgcc cctgcttgta cctagatggt 300

tactctttcc gtccattgtc accggctaac attgtgataa tatcagtctg ggtaaatgtta 360
gattaagctg ttgtcctccc ctgac 385

<210> 2188
<211> 413
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-056-Q1-E1-H11

<400> 2188

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gagacggagc ggggagcaag ggcgaagaag cgaagcctgg cagtggatcg ctcgacgagc 120
tctagatctc ccggcgacct agctgttcgg agttcccatt cccaccaga gatactgttc 180
gcgatcttcg agcccgacga agctcaatcc ggagcaacac aaggctcgtgt gtgcgatgtg 240
gccgagtccg cgacggagga atcctccgat ccaccagct caccgatcta cgaaccctac 300
attcctgacg aactagccgc agatccagtc gtacgctccg ccttcaagca tgccatggct 360
aagtacgagg gagaagaaga tcgtctagct gacctgttca ctatggatca cta 413

<210> 2189
<211> 410
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-A10

<400> 2189

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cttgtaaccg ggatgccgag tctgatcaga atgtctcggg agaaggaata tccttcgttg 120
accgtgagag cttgtgatgg gctaagttgg gactcccctg catggatttg aactttcgaa 180
agttgtgccc gcggttatgg gcagatggga atttgtaaat gtccggttgt agataacatg 240
aaacttaact taattaaaat gcaccaactg cgtgtgtaac tgtgatggtc tcttctcggc 300
ggagtccggg aagtgaacac ggtgttgagg taatgtttga cgtaggttgt tctaggatca 360
cttcttgatc atagttgggt gaccgtgctt ttgccttctc ttctcgtctc 410

<210> 2190

<211> 409
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-057-Q1-E1-A12

 <400> 2190

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 ttgcttttct tgctgtttga atagaatacc aagatctgaa attattaaat gagagagtct 120
 tcacatagtt gcataattat ttgactactc attgatcttc acttatatct ttcggagtag 180
 tttgtcgttt gctctagtgc ttcacttata tatttttagag catgggtggta gttctatttt 240
 gaagaaatag attaactctc atgcttcact catattatit tgagagtctt aaatagcatg 300
 gtaatgtgct gaaaaatcct aatatgccaa gcatacaaga ttgtgaagaa ttcttatgag 360
 tatgttgaat actaagagaa gattgatgct tgatgattgt tttgagata 409

<210> 2191
 <211> 400
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-057-Q1-E1-A3

 <400> 2191

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 taagatctaa aagggtctgac ctgcaggcta ccctcttgct tgatgccttt aacaaggacc 120
 gagctgcaat acctcaacct attccacctc ctcaaattggc aacctgcca gcacctctc 180
 ctctgatgc tcgtactcaa gaactgatca atgagaagct aagtaaagct gaagcccttg 240
 gtgaacaagg gatggtagaa gaagcgcaga aagctttaga agaagcagaa gctctcaaaa 300
 agttggcagc ggcacggcag gagccagttg ctgaccttc taaatacagt gttgctgatg 360
 ttcgaattac tgatcagaag ttgcgcctct gtgacatatg 400

<210> 2192
 <211> 418
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-057-Q1-E1-A6

<400> 2192

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ccaataagca gggtaattag cctactattg ataatccatg tactaatcaa attgatattt 120
cttataaaac aactaggta tttcatatcc gtataacaac aacctatgatt tcataatcga 180
attacatcag atagcttcgg cactcagtta cgccattaca caacagcacc aagttccaca 240
tgcagcatca aaaacctttg gaatgtagca tcatacacag taaatagata gatgaatctc 300
atctgggaaa ctgcagaagc ggaaggaaag tattgagcct tcagtgatgt tgaatgtcct 360
tgcaacttta ggccagtggc tatggacaat tgccagccca accttcgtcc tcttcagc 418

<210> 2193

<211> 410

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-A8

<400> 2193

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ccaccgttcc atttattata acagacttca tcattgtcat attgctttgc atgatcatgt 120
agttgacatc atatttgtgg caaagccacc tttcataatt ctttcataca tgctactctt 180
gagtcattgc acatcccggc acaccaccag aggcattcat atagagtcac attttgttct 240
aagtattaag ttgtaattct tcagttgcaa gttaaataaaa gtgtgacgat catcattatt 300
agagcattgt ccagtgagg aaaggatgat ggagactatg attccccac atgtcggggt 360
gagactccgg aaaaaaaaaa agagcaaaaa gaaaaaaaaa cgggcgctct 410

<210> 2194

<211> 410

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-B10

<400> 2194

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accatagaga acttcgaata cagtaggttt aacaccaaaa taaataaata atgagttcat 120

tacagtacct tatgtggtgg ttttgttttc tttcactaac ggagcttata agatttcctg 180
 ttgagttttg tgttgtgaag ttttcaagtt ttgggttaaag ctttgatgga gtacggaata 240
 aagagtggca aaagcctaata cttggggatg cccatggcac cccaagatat tcaagaatat 300
 ccaaaagcct aagcttgggg gatgccccgg gaaggcatcc cctctttcgt cttcgttcat 360
 tggttaacttc acttggagat atatttttat tcgccacatg ataagtgggt 410

<210> 2195
 <211> 327
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-B11
 <400> 2195

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 tatagatggc ctagataagg aatagggttaa tgattgattg tattaaccaa ccggtacctt 120
 aacccgacaa tgtaaaaagt tggcaaccgc aggtttttgg attaaacccc caaacccaaa 180
 aaatggtgaa ttgctcccca gaatttgaaa agaaccatcc ataatgtccg gaaactagga 240
 aacccggaca ttacgcacat atacacaaaa ggttttattt cgggctatat gttatatcac 300
 atatgtaaaa cacatttccc agggaaa 327

<210> 2196
 <211> 454
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-B12
 <400> 2196

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 gctgccttgg gacgtcctcc cacctccttg gccgccaccc cttgctccta tataagtaga 120
 tccatctagt agcttttcct tgggatttgt ttagttaaaa gttagccatt gcaacttcgt 180
 gtacttcgtt tgtgttcaac gaccagacca agaccgctta cggatcccca ccattatcaa 240
 tacttcatat atattcgag tattcagatt gctttatcat attcttgctc gttcttcgat 300
 tgcttgcagg aatagacctt cgtggtcagg ttgatcgtgc tccagcttgg tcaataacct 360

ctcggagttg gtttagcgat tgctaaggcg caacgtcgtg cacgtttgta gtcggatcgt 420
 caaagtcgtc tctaccaaatt cgatagttat catc 454

<210> 2197
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-B6

<400> 2197

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 ctggcgcgtc gtggcggcgt gaagcgcac tcgggggtca tctacgagga gaccgcgggc 180
 gtgctcaaga tcttcctcga gaacgtcatc cgcgacgccg tcacctacac cgagcacgcc 240
 cgccgcaaga ccgtcactgc catggacgtc gtctacgcac tcaagcgcca gggacgcacc 300
 ctctacggat tcggaggcta ggccaccacc accagattag agtgtctggg gttcgtggtc 360
 gttgatgtaa ttgcagcatc tcgctgttgt ttgctatctt ctgtagaatg gaatggaatg 420
 gaaattgaac tagtttatcc ttcaag 446

<210> 2198
 <211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-B7

<400> 2198

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 ttgattcttc tgtggatgag gtgaagaagc aatataggaa gttgtcactg ttgggtccatc 120
 ctgacaagtg caagcatcca caagcacaag aagcttttgg agccctggca aaagcacagc 180
 agctcctact tgatccacag gaaagagggt acattcttga tcaagtcact tctgcaaaaag 240
 aagaactgag ggcaaaaagg aaaaaagagt tgaggaaaga cagtgcactt aagataaaat 300
 cccaagtaga tgagggaag tatgaagagc agtttgaaag atcggacgaa tttcagaagc 360
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aga

423

<210> 2199
<211> 345
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-B8

<400> 2199

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tttgccggtt gattgaagtg ccatgtaatt gacgcatttg tgaagtcagc tgtcacctgt 120
acttggtggt aattgtttga actatatgct tatctgttgt catcaaaaaa aaaaaaaaaa 180
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaggaaaaag 240
ataaaaaaaaa aaaaaaaaaa aaaagcggcc gccctaaagg ttcaaagctt acttacgcgt 300
gcatgcaact tcaaagccct tcaaaagtgt caccaaaatt caatt 345

<210> 2200
<211> 245
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-B9

<400> 2200

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tgagttgctg atgttggtgcc ttatgcggtg gggataaggg atgtgtgatg tgcttgtgtg 120
gtgaaaggcg aggagtggct tttccttttt gcgggaggct gttcattttt gtctattcta 180
tttttatatt caagatacat acaattatatt atcatcatta taatcgagat aataaatatt 240
tattt 245

<210> 2201
<211> 454
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-C10

<400> 2201

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tgaagattgc gctcgggtgca gcaagggggc ttgagtatct ccatggagct gagagatcca 120
tcatctatag ggatttcaag acatcaaaca tcttgctaga cgcggattat aatgctaagc 180
tttcagactt tggcctagca agaactggac ctagtggaga ccaaaccat gtctcaactc 240
gggtcatggg aacttatggc tatgcagctc ctgaatatgt gatgactggc catttgacag 300
cacggagtga tgtttatggg ttggtgttg tacttctcga gatgattatt gggaggaggg 360
ctgtggacaa gagccggccg agccgtgagc ataacctagt tgagtgggca cgccccctcc 420
ttgtccacaa ccggaagctc ttcagaatca ttga 454

<210> 2202
<211> 404
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-C11

<400> 2202

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gacatcatca tgaggaggtt cagatctgga tcttctctgt tgctcatcac caccgacctg 120
ctggcccgtg gtattgatgt gcagcaagtc tcccttgta tcaactatga cctgccgact 180
cagcctgaga attacctcca tcgcattggt cgtagtggtc gggtcgggag gaaggaggtt 240
gccatcaact ttgtcaccg tgaagatgag aggatgctgt tcgacatcca gaagttctac 300
aacgtgggtc ttgaggagct cccggccaat gtcgctgacc ttctctagat tatatcttag 360
gaatgcagta aagtgcttga taaagttcgt tttgttgaa tatk 404

<210> 2203
<211> 434
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-C12

<400> 2203

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gggtggattag atagcttaaa cgctcaagca aaagaacata ttctccaatt gcagtctcgc 120

ttggattcta tggaaagggg gctacatgaa ctcaagaaga aaaattcttc cttgcaaagt 180
 caacagtttg ctggagaaga aaaaaatgag ttacttgact acttgagatc attatcacct 240
 gacacgggta tcgaactctc ggaaccttcc tgccttggtg tgcaggaagc tattcattcc 300
 gtggtacatg gtcttctagc aactctctcc cccaaaatgc atgcaaagcc ccctccacca 360
 tcagagaaca tggctggtgg aaccctgaat ttcgggaatg gggatgatga ccgtgctgaa 420
 ctcgtggagg atgt 434

<210> 2204
 <211> 366
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-C4

<400> 2204

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 cgctgcctgc tataacggac agcgcctcct gttggcgccg ccgccggcgg gggtggtgcc 180
 ctggcggcgg aggggtgatg tcctctgccg ccgggtgctc ccctgcttgt acctagatgg 240
 ttggttactc tttccgtcca ttgtcaccgg ctaacattgt gataatatca gtctgggtaa 300
 tgttagacac atgaaaaaag aagagagaaa gaagaaaagc ggccgctcta aaggatccaa 360
 gcttac 366

<210> 2205
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-057-Q1-E1-C5

<400> 2205

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 cggcgtccaa ggaggccggc ggcgagggca agaccggggg ccgcaagaag ggcagcaagg 120
 cgaagaaggg cgtggagacg tacaagatct acatcttcaa ggtgctgaag caggtgcacc 180
 ctgacatcgg catctcctcc aaggccatgt ccatcatgaa ctcttcatc aacgacatct 240

tcgagaagct cgccggggag tccgccaagc tggcccgcta caacaagaag cccaccatca 300
 cctcccggga gatccagacc tccgtccgcc tcgtcctccc cggggagctc gccaaagcacg 360
 ccgtctccga nggcaccaag gccgtcacca agttcacctc ctctct 405

<210> 2206
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-C6
 <400> 2206

attccccgggt cgacggggccg gatcatggcg ctcaagaaga cgcgccctccc ggaggacgac 60
 gaggggcgtgc cccccacggc gctcagggag gtctcgctgc tgcggatgct gtcgcaggac 120
 ccgcacgtcg tgcgcctgct cgatctcaag cagggccaga acaaggaggg ccagaccatc 180
 ctctacctcg tcttcgagta catggacacc gacctcaaga agttcatccg cggccaccgc 240
 cagaaccacg agaagatccc cgccccacacc gtcaagatct tgatgtacca gctctgcaag 300
 ggcgtggctt tctgccacgg acgcgggtgtc ctgcaccgtg acctcaagcc acacaacctg 360
 ctcatggacc gcaagaccat ggctctcaag atcgccgata ttgggctcag tcgtgccttc 420
 acggttcctc tcaagaagta cacacacga 449

<210> 2207
 <211> 448
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-C7
 <400> 2207

gtacagtcca gaattcccgg gtcgacgggg tcatccctgg attggtgctg acacacacaa 60
 tacttgaagg atttataaca gaggttcaatc acacacttat tacatcgaat gtctcagaag 120
 agaacttatt acaataaata tggcttaagg ccatctaaat aagataacag cggaaggctt 180
 ggaagataaa gtgagtccat caactccaac ggcatagctg agtgcacggc aacgacctag 240
 cacacettac tctttgtctg aaaagtttgc aacatgatat gttgcagccc gaaatgggtc 300
 agcacatgga atatgctggc aagataaacac ggtagagcga tgaacaggta aatgctatca 360

ctacatgcat atgaggctgg tggaggctct atggttataa tgttttgcga aaagccaatt 420
 tttccctaca tcaaagggaa tatatttt 448

<210> 2208
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-C8

<400> 2208

aattccccggg tcgacgggat ttgccagatg ggcgagaagc ttgtcaacat cataaagcag 60
 atggatccca gggacccttt cagaatcgag atgacggaca tgctgatcga taagctgtat 120
 aatatgggtg taattccaac aaagaagagc ttggttaaata gtgagagact ttcagtgcgc 180
 gccttcgcca ggcggagact tgcaacaatt atggtgaagc tcaagtttgc cgaacacctt 240
 aaagaggctg tcacctacat tgaacagggg catgtgcgtg taggcccaga gacggtcacc 300
 gatccagcct tccttgtgac caggaacatg gaggacttca tcacctgggt ggattcctca 360
 aagatcaaga cgaagatcat ggagtttaata ggtgcattgg 400

<210> 2209
 <211> 343
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-057-Q1-E1-C9

<400> 2209

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 cggcggttat ccgaccggcg aggtggttgt cgcggaggtg aagctccctg agaaaggaga 120
 ggttgcccaa gaatggggag atgcgtcccg acaggttgaa ggaggccatg cgcagcgaga 180
 caaccctgtc ggggtgccgc ccgccgcccg caagcaacgc ctggccagct gcagtgggtg 240
 gtggaggtgt tccatgaagc cagcaaccct ctcgggggcg caatgggtgga cttgaaggaa 300
 agganccgca gttggtcgct cccctcccc gccgggaccg ggg 343

<210> 2210

<211> 416
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-D12
 <400> 2210

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 ctaggcaaga aatggcagag attgacttca gtgaactccg tctccttgat gctagaccaa 120
 atctgccaca ggcgaaattht tttccttacg ttcctaacga ggacgacgct cttctagatg 180
 acattcccag cgatgatgat gatthttgaag aggaggatgc tctgcccata caaggagagg 240
 acttcaagg ggaagccgcc gccgccgctc acaagcttgt tctcctatt cagtccagct 300
 gagaagatga ttcagttggt ctacctctat ctattctatc caattatggt tagcagatgt 360
 ctctgtcgtg gatccgtaca tgtgggttgg tcgggtctat caatctgtat taattt 416

<210> 2211
 <211> 411
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-D3
 <400> 2211

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 gcacactcgt tccccctgga tggattgggg aaattctccg cctgagcctt gtcactgaag 120
 gaagtcaatt ttgctcgaa ggggactaga tccacagggg gaagaaatcc ctatgtctgt 180
 agcttcacta gctgactgtg ggatgcggaa caatttctcc ccatcgccctt ttccggggcc 240
 gtggggacgg gaggaagagc tgggagcact agccatgttg gaatggtttc tctagaaag 300
 ctctgaggat tctcacttg gtgtggaatg gatctgaaga tccaatctc tttaaataga 360
 cgcctttctt aaatggtcag ggtggtatat gcaaaaataa cccaacctct c 411

<210> 2212
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-D6

<400> 2212

cgggtcgacg ggcaagacta actggctatg agtgttttta tagcagggtg gtaagcattg 60

ggattttgtg ggatttcacc gagtcgggaa ggaagcttgc gtgggaacct acgaggtcgc 120

gcggggaacgg gatcacccgac gattcattgg caccaccatt tggccaaaag aacgacccccg 180

cgcgctgcmc aagcttgcmc tgtaagccat atgcggcagc ggggtgacaa gacgtgcmg 240

aggaggacga gaggccatgt acacatatgg ttaataaaaa acgcttgcaa tttaattacc 300

tactatacca ccgtcctggt ttaagtatga ttaactaat aaaatatgaa tgcatgcmc 360

caaagattat atagtcggat ttgtatttga acatagtttc caattaaata atttttt 417

<210> 2213

<211> 434

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-D8

<400> 2213

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gttgtcagca agaacgccga cgagatgaag gctgcmatga gcaccatgga tggcatcata 120

aacacgggtgt ctgcaaacat ccccatggcc cctctcttcg ggctactcaa gccaacgggc 180

aagatgggtca tggtcggcct ccagagaag cctatcmagg tccctccctt tgctctggtt 240

gccaagaaca agaccctggc cgggagcttc atcggcggca tgagggacac ccaggagatg 300

ctggacctcg cggcgaagca tgggtgtgacg gcagacatcg aggtgatcmg cggcaggtac 360

gtgaacacgg ccatggagcmg ccttgccaag gccgacgtca ggtatcmgtt cgtcatcmg 420

atcggcaaca ccct 434

<210> 2214

<211> 405

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-057-Q1-E1-D9

<400> 2214

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cgacggcaac gacatcgagc tcgtctcccg ctccgccacc ctcatcaacc agaaatgcc 120
 cgtcaagaac aaggacatca ggaagttctt ggacggtatc tacgtcagcg acaagggcgc 180
 catcaaggag gagtagagtg cgaaaaccgt cccagaagcc gtgtttctgc ctgccgtgtt 240
 tcatcgtctt tgtgtcgtgg ttgtgatttt gaactttctc tagactgaat tttgtagtgg 300
 agttaattan ggatgcgcta tgcaacatgt tatctttatt atcctacata ttgtcaccgt 360
 gagaattggc acgatgctta tcttccccta aaggttgatg acttc 405

<210> 2215
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-E1
 <400> 2215

gggtcgacgg cgaagtcgga cgccaaggag ggcggcgaca agaagggcaa gaagaaggcc 60
 aagaagagcg tggagacgta caagatctac atcttcaagg tgctgaagca ggtgcacccc 120
 gacatcgga tctcctccaa ggccatgtcc atcatgaact ccttcatcaa cgacatcttc 180
 gaaaagctcg ccggcaaggc cgccaagctg gcgcggtaca acaagaagcc aaccatcacg 240
 tcccgggaga tccagacctc cgtccgcctc gtcctcccg ggcagctcgc caagcacgcc 300
 gtctccgagg gcaccaaggc tgtcaccaag ttcacctcct cttaggctgt tcgccttctt 360
 gtgtctcgta gttaactgtt cgggtgtgtt 390

<210> 2216
 <211> 446
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-E10
 <400> 2216

attcccgggt cgacgggaca catcaaagtt atttagtacg tactctctcc aaaaaagggc 60
 tgatcatgtc atggctacca tctgtgtc catcggtgag tacatgcact attcacgtgc 120
 cattgaggag aaaaaatatt gtgtactatg tgccatcgaa gtacatgact cacttacaca 180
 ctgcttatct gattatctcc attttcttgc atgacacctc ctcttgatg ctaaagtca 240

cgctgtttgg caaaaggatg aacacagctc acgtacaaga taagagttga agaacatagg 300
 ttcccggcga ccgagaagga gcaaggaacc tcgcggtgga gcgtctgcaa ggaaccttgc 360
 atgttttccc ctgtttttgc cgccttccca cctataaaca aatataagaa catgaactct 420
 ttgctaacca ctacaaatga tacatc 446

<210> 2217
 <211> 413
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-E12
 <400> 2217

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 gtgtatcaaa gaaaatttgg aaaatatata ttttacaatg cccattgag gtgtagactg 120
 atgttttgat cagttagtct agagggcaat ataaactcaa aaaaattcaa aaaattataa 180
 aaccttgga acctatctgt gtttgtgcaa gagatcatgt gtgcaaattt tgaggtaatt 240
 tagagggtgt cgaaaaaatg acctcgttat ggagggacca tttggtaact taagccagtt 300
 tttgaacaaa tgtgattttt accacaacct ccaaagacc ccatttttct tttacatggt 360
 gacctacatg tgccaaacat ggctatcata gaaagtttga aaaaacttta att 413

<210> 2218
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-E6
 <400> 2218

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 agcaagttcc tgctactgag gagcagaagt ggctcattga gccacgggg aaagagtaag 120
 tgccacttta taataatttc attattttgc ttgtcacatg ctcatcttgg ttgttattta 180
 ttttgcttgt cacatgctaa tagttcatte ttttgcagca actggatata ttctaaaggg 240
 gtccgtatcc ccaacggcct catcacgctc ttgctgaagt tacactggcc ggggttgtag 300
 tgtccggatc cagtcaggca ccgaaccat cgggtcttgg ccacgagctg ggagcactgg 360

gaagcggccc tccacgcgga ccatgggacc catgccaagg ccgtgatcac cactctctgg 420
gtgaattctc ttcagaagca c 441

<210> 2219
<211> 429
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-057-Q1-E1-E7

<400> 2219

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atggcataat caactggcga gcaataataa taaaactcgg atgacaacac tttctcaaaa 120
caatcataat atgatataac aagatgggtat cccgctggcc ctttctgaga ccgcaaaaca 180
taaatgcaga gcacctttaa agatcaagga ctgactaaac attgtaattc atggtaaaag 240
atatccagtc aagtcatacc caatataaac taatagtaat gcatgcaaat gacagcgggtg 300
ctctccagca ggtgcttttt aataagaagg tgatgactca acataaaagt aaatagatag 360
gcccttcacg gagggaagca gggattcgta gaggtgccag agctcgaatt taaaatagag 420
ataaataat 429

<210> 2220
<211> 443
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-E8

<400> 2220

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aagtttctgt ttttttacag caagatcaca ttaactttca cccaagtatt cccaaaggtc 120
ttacttgga ctttattgaa aaaaaagcta taaaacatga ttactagagt agcttaatca 180
tgtgtacaca caaaaacaat aaagataaat attgggttgt ctccaacaa acgctttact 240
ttaatgcctt ttagctaggc atgatgattt caatgaggct cacataaaag acaagaattg 300
aaacataaag agagcatcat gaagaatatg actagcaaat ttaaacttaa tccacttctt 360

atgcctaggg attttgtgag cacacaattt aagggaacaa gaatcaacta gcataggaag 420
gcaaaacaag tataacttcg aaa 443

<210> 2221
<211> 449
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-E9

<400> 2221

gtccagaagt cccgggtcga cgggccacac gcactataac atacatacta cgccatgtca 60
ccgcatgcat gcatgtggaa atctttttgg attttcagtt tttaaaatgt tttatctctt 120
aaatgaaaaa tccaattgaa gatccgtttt caccattaaa tccctcgcga cgagatcttc 180
gaaactagat ctcatatcaa tatatttcaa cgaaattttt tttgggttaa agttgccatg 240
tctattgcac atgaattacc atgatgttta cactaaagtt gtcattgttat gtttcagcta 300
ttttcttcca tattaataag taaattttga catattataa aacggagaat taagaaacta 360
gacttgccat gcaccataaa ctaaaattgc catgatacat gcacctaaaa ttgtcatggc 420
tcatgcaaaa aatattttca ttgtcaaaa 449

<210> 2222
<211> 404
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-F1

<400> 2222

gggtcgacgg cttgtaccta gaccttatga caactagaac cggatactta ataaaacaca 60
cccttccaag ttccacagac aaccgggtga tcgcttttcc gcagggccac aaggagagga 120
ttgccgggta ggattatgct acgcgatgct actggagatg caacttggag atcctatttg 180
gaggacttca atctactccc tcctacatgc tgcaagacgg aggctggcac aagcgtagtc 240
ttcgacagga ttagctatcc cctcttatt ctggcattct gcagttcagt ccaactcatat 300
ggcctcctta cacatatacc catgcatatg tagtgtagct ccttgcttgc gaatactttg 360
gatgagtacc cacggttget tttccccctc ttttccccct tcac 404

<210> 2223
 <211> 450
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-F10

<400> 2223

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 tagaaatact tgtgttgaag tttgtgattc ccataacatg cacgtatggg gaaccgttat 120
 gtgatgaagt cggagcatga tttatttatt gattgtcttc cttatgagtg gcggtcgggg 180
 acgagcgatg gtcttttctt accaatctat ccccttagga gcatgcgtgt agtactttgt 240
 ttcgatgact aatagatttt tgcaataagt atgtgagttc tttatgacta atgttgagtc 300
 catggattat atgcagtctc acccttccat cattgctagc ctcttcggta ccgtgcattg 360
 ccctttctcg cctcgagaat tgggcaaac ttcgtcgggt catccaaacc ccatgatatg 420
 atacactcta tcacacataa gactccttat 450

<210> 2224
 <211> 437
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-F4

<400> 2224

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 gcaggacctt ctctccttg atgtcacccc actgtctctt ggtcttgaga ctgctggagg 180
 agtcatgact gtgctcatca ccaggaacac caccatcccc accaagaagg agcaggtctt 240
 ctccacctac tccgacaacc agcctgggtg gctcatccag gtgtttgagg gtgagaggac 300
 aaggaccagg gacaacaacc tgctcggcaa gtttgagctc tctggcatcc cgctgcgcc 360
 caggggtggt cccagatca ctgtctgctt cgacattgat gccaacgta tcctgaatgt 420
 ctctgctgag gacaaga 437

<210> 2225

<211> 202
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-057-Q1-E1-F5

 <400> 2225

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 tatcatgttc cttgttatat gcagttagag actttcaaca tgtagatttg cttccaagac 120
 ttctgtcata gaagagtacc tttcctgttg tcccacggta ccatcttgaa ttagtgaatc 180
 ttggctacct tttagttcgt ag 202

<210> 2226
 <211> 415
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-057-Q1-E1-F6

 <400> 2226

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 tgaaattatg ctcgaggaga acaggacagg tgaatcttct cataggggat tttatcttta 180
 taatgataag cgacaagctt ctccagatcc tgatatcaaa aagtatgttg agaaatcaag 240
 aaacatggca ggtgttgacac aagatcctaa gctgatgaaa ttaacagaca aggacattgt 300
 agagatggtc ttctttcccg tggatgaatga ggctgccga gtgctggatg aggggaattgc 360
 actgaaagca tctgaccttg atgtaacatc cattatggga atgggctttc cttct 415

<210> 2227
 <211> 421
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-057-Q1-E1-F7

 <400> 2227

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aactacgaga agcacaagtc catgtgctac agcctccatg tccatgtcct ccctttcttc 180
 aggtttctaca ggggagccca gggcagggtc agcagcttca gctgcacaaa tgcaaccatc 240
 aagaagttca aggacgccct cgcaaagcac tcgccggaca ggtgcagcct cggcccggcg 300
 cgggggctcg aggaggcgga gctcttggct ctggcggaac acagggacct ggaattcacc 360
 tacaacgaga agccgacgct ggtgccgatc gccgaggcta tccagatgga agctgcctcc 420
 a 421

<210> 2228
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-F8
 <400> 2228

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 gccaatatga atgatgctta tggagatgaa cttgctatag ttccttatgt taaacatgaa 180
 attgttgcta ttgcaccac gcatgatagt cctattatct ttttgaattc tcccaactac 240
 actatatcgg agaagtttgc acttattaag gattatattg atgggttgcc ttttaccatt 300
 gcacatgatg atttttatga atgtgatatg catgtgctag ctgctcctac ttgcaattat 360
 tatgagagag gaaccatata tccgcctctc tatgtttccc atacgtgag attgtgagaa 420
 actgcttata ctatg 435

<210> 2229
 <211> 451
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-057-Q1-E1-F9
 <400> 2229

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 cataatgtcc gagacgaatg gctcgccaga cacctcggcc aagaaaagcc aagaacaatg 120
 gccgcactaa caagcctcat gacccgcttt tgtgcaggag aggacagcta gttggcaaga 180

tgcagcacca gcgacccaag tacatccgaa agtagggatg gaaacggaaa accgcgacgc 240
aataaggacc gtcgcccggac taaggaaaaa agtccgaaga gcacggcagt caacgccgga 300
ttcaaaagct cacgacagaa tcagaaacag ccgcccctcc aagataacag ggacgaccta 360
tccaacctaa acaaaatctc ggataggata tgtcaaatac acagcactcc cggaaagcct 420
gctaaccata cccacagaga ttgttgggtt t . 451

<210> 2230
<211> 375
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-057-Q1-E1-G1

<400> 2230

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gagagctcgc cagaatggtc gccacaggt tccaccagta ccaggtgggtg ggtcgcgcgc 120
tgccgacccc cggcgatgag cagcccaaga tctaccgcat gaagctctgg gccaccaatg 180
aggtccgcgc caagtccaag ttctggtact tctgaggaa gctcaagaag gtgaagaaag 240
ccaacggcca gatgctcgcc atcaacgaga tctttgagaa gaaccaccca ccatcaagaa 300
ctacggcatc tggtgaggt accanagcag gaccggttac cacaacatgt tcaaggagta 360
ccgtggcaca accct 375

<210> 2231
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-G10

<400> 2231

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tggtttcaga tggtaaattt ggaaaaggtc ctcgggagct cactggggct gttgatttaa 120
ttagccgcta caggctgctg aaccatcaca gtttcttttg taagaaacca ttgccactgg 180
ctatctcaga tacacattat cttcagaatg ttgtgggtga cactgaaatc cgtaaaggag 240
aagggatgga gatagatcaa ctcatcaga atccagaccc gagggagaag aagactgctt 300

atattaaacc ctttgacatg gaaacactag ggcacgcatt tcagttgcga gaaacagcgc 360
cagtagatct gccttcggct gaaaaaggta ctccgactat atcggggaat tcaaag 416

<210> 2232
<211> 437
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-G11

<400> 2232

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attctacaaa actctacctt ggtgaccccg tatgtcgatg aacacaagaa cagtctgcgc 120
tccaaacacc cggagcagtg cgacgactgg actacatgtg aacacatcag gactttcaaa 180
agttgggttg aaacacgtct cagagggtgac aacactatct gtgatgagtt gtacttggtg 240
tctaggggac catctttgac tgtattgact taaaaaggat acgagataaa tgggaatata 300
ttttacacga tcgccaaga tcaaaagagc accaaccaaa acagcgggtg ccgctttgat 360
gcagcaacca agagcggaaa ggatacatat tatgggttaca tagtggacat atgggaactt 420
gactacggac ctgattt 437

<210> 2233
<211> 401
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-G12

<400> 2233

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tggtccggat ttgggcattt ttatatcgtg cagtccgcag ttacctgca tctttcgctt 120
tgaagagtgt acatttgcta tgatcatcac gagatttggt cttgtaaatg tgggcaagtc 180
atttgcattt tcataaagca aacttccctt gcctacattg tatcaaatgg acaaaagctc 240
atcacattgg tcaaaactgat gcggttatga ctaaaaacaa ggcgtgaac agaaaaaag 300
gcggccgccc taacggttcc aggttacgt cgccttgcat gcaacgtcaa agcccttcaa 360
tagtgctgcc aaatttcatt tcatggggct tcattttaaa c 401

<210> 2234
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-G3

<400> 2234

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 gctcgaccga ctcgccggac cggggaagct tcgggaccaa ggagacgtcc ctgagcgagc 120
 tggacatcta cggcagctcg cggtagcagg cgatgctgct gcggggggag gacgtgagga 180
 acacgagctg gctgcacggc gggttcgacg acgacaagcc cgaccagagc cccctgttcg 240
 accaccggtt cgagccgctc ccggagccct tcagcccctt ctgacgctga cggccgcctc 300
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 ttgtgtttgc acaagatgtg tagtctgtag gccctttgat 400

<210> 2235
 <211> 355
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-G5

<400> 2235

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 ccgacggagt gcaagcagca gtagaacttt gtggatgcag ttgttgcagt attttttcca 120
 ttgaactgcc cagggggaat gagcttttat gctggttggt ttgtgcacgg gtgagacggt 180
 tgggtgtggat atttaccgta ggcattggtt tgtatcaggt ggcgtggtga ttgtgctggt 240
 gtgggatgga tggtttggga gtttgggacg gtcattgtag cgtgttattc ttattatggt 300
 ctctagctat atgcagtcga aggacacct aagactgtaa ttatatttga actcg 355

<210> 2236
 <211> 424
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-G6

<400> 2236

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gccggagcag tagcagcagc gcgagtgagt gagcgagagc tgaagcagca gcagcagatc 120

tggctggtac gaccgcccgc gccgaagggg cctcacacta ggggagagcc gccatggaga 180

tgtcgcccgc ggcgctgact tcaaggtagc cgctccatgg ggggtgcagg tggagctctg 240

tcggcaccgg gaggtcgagt taaggagaag gtgtgatgcg ataagtgtac aacctctttg 300

gtggcgccga gtaggcctcg gcttcgtccg aggagtcggt gaggatgttg cggttccggt 360

ggagcaggtt aaggcggcgc tgtggggatg gagcagccgc gatagacgag gcgatcgtcg 420

gaga 424

<210> 2237

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-G7

<400> 2237

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ctcgacctcc atccaggaga tggtccggag ggtgagcgag cagttcactg ccatgttcag 120

gaggaaggct ttcttgcatg ggtacactgg tgaaggcatg gacgagatgg agttcaccga 180

ggcggagagc aacatgaacg acctcgtctc ggagtaccag cagtaccagg atgccactgc 240

tgacgaggag ggcgagtacg aggatgagga tcaggagcct gaggaggaca tgtaagggtg 300

gatgtccatg tcgtgctttg ctgggtgggg gttctggggg cagagtttga tctgtttggt 360

gctttgttat aaatctgttt atcatcgcaa ctaccgcttg tacgccaccg ccattcttcc 420

tgcccttt 427

<210> 2238

<211> 272

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-057-Q1-E1-H1

<400> 2238

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aatggatctt acgatgcatg ttgtttgttg cgtaacgac taaaataacc ctaagtgcac 120
gtttgtttca ctctatgtg gcctaactgc tccaacatcc atcaattcag caagggaana 180
tgtcgtctaa aactatgtcc acagagtaga ttatgggatt ttggctaaaa gcttatgtgc 240
actataaaac gggataaagg gagttttttt gc 272

<210> 2239
<211> 377
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-057-Q1-E1-H3

<400> 2239

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agttcgctga gcggaatccg gacgtgctgt tcctgcaagt caactacgag aagcacaagt 120
ccatgtgcta cagcctccat gtccatgtcc tccctttctt caggttctac aggggagccc 180
agggcanggt cagcagcttc agctgcacaa atgcaaccat caagaagttc aaggacgccc 240
tcgcaaagca ctgcccggac aggtgcagcc tcggcccggc gcgggggctc gaggaggcgg 300
agctcttggc tctggcggca aacagggacc tggaattcac ctacaacgag aagccgacgc 360
tggtgccgat cgccgag 377

<210> 2240
<211> 378
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-057-Q1-E1-H7

<400> 2240

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gagctctact cactcgtcac tgttgccgag gtgcctgctg agggtttgaa ggggctggga 180
accaaggttg tcgatgacac tgagtagaat ctttctttat ctacatcgtt agaatgagct 240

gttattttgc attgcaccag catgtttttt gtatcccatg gaagttttgg agtatggaat 300
atcgcaagct atctattttc cttcatctaa aaaaaaaaaa aaaaaagaaa attaaagaga 360
aaaaagaaaa aatgaaaa 378

<210> 2241
<211> 421
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-058-Q1-E1-A2
<400> 2241

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ttctgagtcc aatttgtttt tttaggggtg gttctgagtc gagttattgc taaaataact 120
tcaggatgct gccataaatt gtattgttgt tcgttaaagt acactttttt cctcaggaat 180
tacttcaggg gcagattatg gttacctccg gccggcccct caccggtgag gtgtaatgca 240
tcaccatatg cttagccctg tgtactgcaa aactgctcat attacgtgcg tataagggtca 300
ttgagtcatc gacattgggtg aatctgccga acgtccaaag gtagatcatg agttgacatg 360
tccggcatatc aatacatatc ggaaagagaa tgtgcacaaa tttagataaa aagaatttgt 420
c 421

<210> 2242
<211> 438
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-058-Q1-E1-A6
<400> 2242

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tcgataaagg gtgaatttta ttgactcgaa ataaagcatc aagttgatat aaacacgatg 120
aaaacataca cggcctctgc ataattaaga cgacataaac caataccaac acacacacaa 180
aatacccgct agcaaatagc aaggccatat aagaccaaag cattgcataa gcgagagaaa 240
aaccgaagc gaagcgaaca aatctgcgat cgacaaacta caacaatgac catatccaca 300
ccaaccatct catgatatca taaggacaac ggggttcttc aacagcaacg ctttcatgat 360

gagagcaacg ctcgagagcc gccgtcatcg gatccaacca ccaaaggtaa gactctaggt 420
tttcaccctg aagacagt 438

<210> 2243
<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-A8

<400> 2243

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cgatccgcag gcacttgaag caaagcacac ggcacctag ctagtaattg ggaaagcaaa 120
attagtccaa acaagtatac gatccggaac agtaccatgc gcagatcagg ctaggatcgg 180
aggggaccac gaactcctca gctccggtag agggatcccg ccgcccaggt gggtcggcgg 240
ccgtcaggtc tgccaattgg actggctccg cccggccgcc tccccgcttc gtcacctacc 300
cctttgctag ctggtggctg taacttgctg gcttctccg ccccttatcc cttctcttgt 360
atgcgattca cgcagttggc ttcgtgattg ctaggaccgc gagtggttcc gccct 415

<210> 2244
<211> 408
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-A9

<400> 2244

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aatatctggt gcagccgctt ggccgtgctg aagacgaaga gcattccagt gactttgagc 120
cagaagaaaa tggatgatgt gctgaggacg aggagattga ggatgatgat gctgaggatg 180
gtgaggattc tgtcaaggcg caatcctctt cgaagaggaa gaggtctggc gcggaggatg 240
aagatgatga tgacggtgat gatgatggtg atgatgatga gaagcctcca tcaaagcgat 300
agtcaatttg ttcttgctga tctggatatc tttctgcttg ggccaagaag gaaaataatc 360
ctcacggagc gggttgttgg taaatgctgt agcttttagga catctgtg 408

<210> 2245
 <211> 417
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-058-Q1-E1-B8

 <400> 2245

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 gggatcggcg cgggtgaactt tgttgtgtac acggcattcg ccaagaatta cacggtgaag 120
 aaagtcgagc tccggtgaac acggtttgct gtcggtcaca ggcgtacggt tttcatcctc 180
 tttgttgtgt atgtaccgtc taaaaacca gttcgatgta attaaatata gcccaaaatt 240
 cctgtagctg tgttcatttg aataaatata aaaggtgcct ttggaacaga aaaaaaaaaat 300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaacc aataaaaaaa aaaaaaaaaa 360
 aaaaaaaaaa aaaaagttaa aaaaaaaaaa aaaaagaaaa aaaaaaaagg ggcccccc 417

<210> 2246
 <211> 400
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-058-Q1-E1-C7

 <400> 2246

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 aaggcagctg aggaattaaa agccgaacag gctgctcatc accgaagtga ggataaaata 120
 gccaacatgg ctcttgagct gcaaaacacc gcgagccgat atgagcttct cgaaagggaa 180
 aaccaaataa aaacggctga cctagagaag gccttacaag cagcaaagga aactcgctct 240
 aaaatcagaa tggctcggga gaagcttcag caagccggtg atatcggtgc tgggaagccc 300
 tttttattgt gaatgaaatt cggcgatccg aagtatgcc cccttgacca attgtggagt 360
 tctctagatg cgtacttgga tttagcaaag agtgatgctg 400

<210> 2247
 <211> 387
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-058-Q1-E1-C8

<400> 2247

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gcgttagcag caaagtattc ccaacaggat tgtaagctag acagcctgtt gtatggtata 120
gaggaagagt atagccaatc taagtgacta tgtaatttaa atggacctat gtagtcctta 180
gccggattga aaatcatttg tcatggcgga ccttttcgct tcagcccccg gacctgatag 240
tccggagtgt atccgaatac ccgcacagtt ataaaaaacc ggggtatgca tggaaaccag 300
gcgtatgggt cacaagtgcc tgaatatacc agtatccaac tagttatgtg atattacatg 360
gatagtttga aacatctttc agagaga 387

<210> 2248

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-D12

<400> 2248

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cgtgccctcc tatctcgtgg agtcctcgag tatcttctga cttgaaactcc acgtctccag 120
gatgatattc ttgcaaaaaa tcacgttgcc gaaggtttca ttccgtttgg actccgtttg 180
atattccttt tcttcgaaat actgaaacag gcaataaaac agcaatatgg gctgggcctc 240
tggttaatag gttagtccca aaagtaatat aaaagtgtat aataaagccc ataatcattc 300
aaagcacata gtaatatagc atggaacaat caaaaattat agatacgttg gagacgtatc 360
aacgcatcaa attcctcctt aatgcctgct tgaaccataa aatcttctga ttgcca 416

<210> 2249

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-D6

<400> 2249

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tcgtgtgcga ccggcgagcg ctcaaataata gaaatacgtg cagtagagct aaaaatacaa 120

ttatacaggc gaaattgatt cgggtcgcaa gtacatccca cacagtcagt ccccgctaaa 180
catttccgtt cgtatgtaca tcccacacag tcgctccaag gaaaatgttt ccattcatag 240
gtacatcaca caaaaaattt cccgttaa at cgtttgcgtt attgaatgta tcagacatgg 300
tccgtataag aaactgtgtg gcaaaggatg tccatcacac acagttttta tgtggtaa ac 360
gtttgcgcaa ggtggcctaa ctcaaacagt tttcaagaga aagtcatgta tgattacaca 420
ttgatccaac ac 432

<210> 2250
<211> 438
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-D7

<400> 2250

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gttatctgtc tgtttgaaca tttgctttgt ggtgtttgtt ttacaacctg ttgtgttgta 180
agaaccttgt atgtttgaac ctgttatgca ccttggttaa taaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
aaaaaaaacc caaaaaaaaaa aaaaaaaatt aaaataaaaa agggggcccc ccaaaggttt 360
caagcttaat ttacccttaa tggaaattta aacccttcc aaagtttccc ccaaattcaa 420
tttctggcc cttttttt 438

<210> 2251
<211> 437
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-D8

<400> 2251

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tccgatacgg tggatgaggg atgtcgaggt gttgctgtgg acgacatcgt cggggaagag 120
gctccggctg ggtggcggac ggagcagggt gtggggtttc gtcgcagggt ttccgggcct 180

cgggtgtacga atgggtgggc ggatgggatg gcagtgggga accatggctt agagacgcgc 240
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 gttcaggggt accacgggca ttttgcgtgt cgggatttca cgggtgggtg gagtttttcgc 360
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 aacagacaaa gatatat 437

<210> 2252
 <211> 92
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-E4

<400> 2252

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 aactcctcca aaatgggtccc caaaattcaa tt 92

<210> 2253
 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-E8

<400> 2253

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 tagggtttga tctgcgaaga tttcggggggg actcacatat atatagctag agggagctag 180
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 ggactttgcg gttaccgggt taaccgttgg agtaccaa at gacctccaaa tggaacgaaa 360
 cttgacaggt ggtctaccgg tggatatcca aggccacttg acaagcctcg gtccattccg 420
 aaaacg 426

<210> 2254
 <211> 456

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-058-Q1-E1-F5
 <400> 2254

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 aacccttact ggaagtatat ggaaaggaat ggaaccccgagg gagctatcac acctttttcga 240
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 ttcaagacaa caagaacatt tcgactatct cggcatgaaa tcccggcgta tagactttct 360
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 caattctcta tgacatcttt cccttgttca cctacg 456

<210> 2255
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-058-Q1-E1-F6
 <400> 2255

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 ccgtcagtct gtggatctca actccattgc tttccttttt gatggctcga ggctccgtgg 180
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 ccagaccgga ggggtgcttc ctggccctta caaggagctt gctgcagcct ggctgttcta 300
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 acggtcctgt gccattacct gaggggggggt c 391

<210> 2256
 <211> 381
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-058-Q1-E1-F8

<400> 2256

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agcaagagct tcactgtcca gtgcaggcac catggcccat cggcaacgat atcggcgtga 120
cagtccttgg gcacacaatt gacatattgc agaggagggtg tgatgaggag tttgccatcc 180
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cgtcactagt gctcattgag agcctgatgc cccgcaagga atgggcagag gccctctgcg 300
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<210> 2257

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-G6

<400> 2257

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catccaacag tcaactgctgc tataatcgtg tgttcactga caaagccttg cgtaaacaag 120
tctgcctcga aatctgtggt atgtacagcc catttgctat tatttttata atgtttactc 180
attttctaata tcatatggaa tttattgcag cccgttttcc attttgagaa ttgctggcca 240
ttttctggtc agtaccaggg tcaaaaaatt aactaaatat gtgggaaatt gcgaaaattc 300
gcaaattttt gctggggaac gaaatattct taatccaaaa attaatagcc atactaaaac 360
aaatttaaaa ataaattagt actatgtcat gttaaatacca atgaaatacg tataagatat 420
cagttaaaa 429

<210> 2258

<211> 434

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-058-Q1-E1-G7

<400> 2258

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agatgctcgt gattggttct gaggcgccct tcaaagtcaa ggggctgtgg ctcttccgtg 120
ggcaggacat ccctgagttc gtcatgaatg aggtctatga catggagctc tacgagtgga 180
ctaaggttga cctctccgac gagggcccaga agaagcgtgt cgaggccatg atcgaggacc 240
ttgagccgtt tgaggggagc gccttgctgg acgccaagtg cttcaagtaa gcgaacagtg 300
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cagttggtct ttttctggaa gagtttgctt gttacttaat ggctatttga cctggtgaac 420
tagttaattt tgtg 434

<210> 2259
<211> 411
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-058-Q1-E1-H5
<400> 2259

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acatgtgtca cccacataca gtgtggtgga gatcgtgggt gaatagataa ctcttatcgt 180
gggaagtgtg atggtttgag cggcaaaagc cgaaaattca gataagaata ttttaaagtt 240
tcgttcgcaa tttcttcagc tgacaaggac acattgaagc ttttgaacga gtttcaaata 300
gaacgcacat gaagaatttg tgaacatact gggttgagtt tagcagagag ggggaaaggg 360
tccgatcaca ttcacttagc aaaaaggtca acttgaagaa ttagcaataa g 411

<210> 2260
<211> 449
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-059-Q1-E1-A10
<400> 2260

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ggtttgagat acaaaccggg actaagggca tcacaccctt tagtcctggt tcgtgtctta 120
aaccgggact aaaaggctca tttgaaccgg gaccaatgcc tttagccgca cgaaccagga 180

ccaatgctca cattaatccc ggttcgtgac tgaaccggga ctaatgggct tatctggccc 240
gaacgaaagc cgtgttttct agtagtgaag atggagtatt gggaagggcc ttataggtct 300
caaatctgaa atctcatcaa ccaagacata tggtgagtgg aggaatgtat ctctactttt 360
acaaaactac tcaaattaaa tagatgcatt aattggatta attatgggtgc atgcatgttt 420
gaccactaga tgagtaggaa cattacatg 449

<210> 2261
<211> 402
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-A5

<400> 2261

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taaaggcaaa cccaaaggga tgggtaccac ttgattatct ggccacaaga aacaaatatt 120
gtatgctaga taccagcagg aatacgaagt ccgcgtgtct gatatgtctg cgtgcttggt 180
acattaacct agactgggtc actggtatca cttcagtttt gtttcacttc tattgtgata 240
gccggagatc taaccgtaat tttgcaacat atatgtaacc gcctttgttg tgactacaag 300
taaccatggg ctcaatttga tttgcatcca gcattccaca cttggttcta ctgccaatat 360
acatctcaag ctgacgctct acaggatcca agcttacgta ca 402

<210> 2262
<211> 454
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-059-Q1-E1-A6

<400> 2262

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aactacgaga agcacaagtc catgtgctac agcctccatg tccatgtcct ccctttcttc 180
aggttctaca ggggagccca gggcagggtc agcagcttca gctgcacaaa tgcaaccatc 240

aagaagttca aggacgccct cgcaaagcac tcgccggaca ggtgcagcct cggcccggcg 300
 cgggggctcg aggaggcgga gctcttggct ctggcggcaa acagggacct ggaattcacc 360
 tacaacgaga agccgacgct ggtgccgatc gccgaggcta tccanatgga agctgcctca 420
 ttggcggccc atggatgcca ttgcccgcgg ccgc 454

<210> 2263
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-A8

<400> 2263

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 ttgggacgtc ctcccacctc cttggccgcc accccttgct cctatataag tagatccatc 120
 tagtagcttt tccttgggat ttgtttagtt aaaagttagc cattgcaact tcgtgtactt 180
 cgtttgtgtc caacgaccag accaagaccg cttacggatc cccaccatta tcaatacttc 240
 atatataatc gtaatattca gattgcttta tcatattctt gcttggttctt cgattgcttg 300
 caggaataga ccttcgtggt caggttgatt gtgctccagc atggtcaata acctctcgga 360
 gttggttttag cgattgctaa ggcgcaacgt cgtgcacgtt tgtagtcgga tcgtcaaagt 420
 catcctca 428

<210> 2264
 <211> 391
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-B1

<400> 2264

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 catgcataaa tgtacactgt aggtgcttta ctcccttgctt tggagtcgat ctctctctc 120
 ctggcttcat tggcttgatt cttgcctgtc ttttgcattc tacgattggt cattgtagtc 180
 ttcaggtttg ttggtcttcc cgacggctgt caactatcat ctacaagttc agtcatttca 240
 tgctggagcc cctacagttt cgaagtgacc atgtcggcca ctgctctac tacacaaata 300

ctgctactcc ccactatattt ttcagtgtag tttgttccat aaatgtgttg tgtcaccgtc 360
tgggtgtgac tgattttttg agatgtacct t 391

<210> 2265
<211> 412
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-B10

<400> 2265

attccccgggt cgacgggggc cgtcagctgg atcgacggcg gggagcgctt caccgagcgc 60
atcgtcgctt tcgcttgcgt caagggcatc ttcttctccg gctccttctg cgccatcttc 120
tgggtcaaga agcgcggggt catgccgggc ctcaccttct ccaatcgagc tcattctccg 180
cgacgagggc ctgcactgcg acttcgctg cctcctctac gacatcctgc gcggcaagct 240
ggacgagtcg cgcgtcttcg agatcgtctc cgaagccgtg gacatcgata gggagtctgt 300
ctgcgacgcg ctgccctgcg cgctcgtcag catgaacggc tacctcatga gccagtacat 360
caagtctgtg gccgaacgcc tgctcatggc gctaggctgc aataagctgt ac 412

<210> 2266
<211> 406
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-B12

<400> 2266

attccccgggt cgacgggtag aggaacgaca gcgcgaggaa gaagaaggag agtgtgagaa 60
gagagtgccg ggccggcctg tttataaggt aattcataag tgggcacgag attcaaggag 120
accacggcgt ggttatctcc ccctcacggt gcctcgattt tcggaaagac agtaacagca 180
gagatccgtt gcggatctgg cggagtaaaa aatggactta atggaggatg acgtcacggc 240
ggattatccg gagtccggag aatgacgtca caccgggtta tggccttcac acgaacggta 300
agccggagat tttttctgtc ggcagagttg aaaattgaca cgagccggct caagtcaatc 360
tggccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaagcggc cgctct 406

<210> 2267

<211> 367
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-059-Q1-E1-B6

 <400> 2267

 ggtaccgatc tacaattccc gggtcgacgg ggatacccaa atggcggagg gtgtatgtcc 60
 tcttccgagg ggtgcccctg cttgtaccta gatggttact ctttccgtcc agtgtcaccg 120
 gctaacattg tgatagtatc agtcagggtta atgtcagatc agtacaactt caactccttc 180
 ctcaacaaga tgcagctggg aatctgcacc tgcaccaaca tcaagatgca attccctgaa 240
 aacgtcaggc agtccaaaag gattcagtct tatctacgag tacataccac ttcataagctc 300
 atcaattgag ccctgaatt tcatttcatt ggccctcatt ttaaagtatc ataactggca 360
 aaccct 367

<210> 2268
 <211> 455
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-059-Q1-E1-B8

 <400> 2268

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 cttgggtttg agcacagttg gccatctgaa agcacaacca caatgcaaag acattaggat 120
 ttctagggaa aattggacag cataacagtt gtaaagtgtc agaaaaagat ttgagagatc 180
 cacaaaagtt tgcaatacca ctcaacaaca tcatatcaag gttctgattc aattagcaac 240
 atactagaaa tagtagaaac tgaattgggg cttgaaacaa caatcctata agctactacg 300
 gattagtaac atgtgaacct gacagaagaa gagagcctag tccttaaccc acgttaaagt 360
 agaagagaat gactcagatc agagggcata aggtaaagga gtaaaagagc cttacgttcc 420
 ctcccacaat caattcccct acatataact aaagc 455

<210> 2269
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-C10

<400> 2269

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agattgctac agactgttct gtttttgaca tattctgttc ttcgtgtgtt gtttgcttat 120
tttgatgaat ctatgagtag tatcgggcgg tatgaaccat agagaagttg gaatacagta 180
ggtttaacac caatattaat aaagaatgat ttcattacag taccttaaag tgggtggttta 240
ttttcttata ctaacggagc tcatgagatt ttttgttgaa gttttgtgtt gtgaagtttt 300
caagtttttt ggtaaagatt tgacggattt tggaataagg attggcaaga gcctaagctt 360
ggggatgccc aaggcacccc aaggtaaaat tcaaggaaaa atga 404

<210> 2270

<211> 301

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-C2

<400> 2270

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atcatgcacc acagggacga agtggagtac aagagggagc gccatgtgat tgtccgcaag 120
gcttgagctg aactgaaccg atggaactac catggaaccc tctggccatc tgatgtgtgt 180
gtataagtag tgctgacact gcaacctgtt tcctgaggaa atttgttgct tcgttgaaat 240
tgagttgtac ttgtactact taaagctgta gctgtatccc tgaattatct tgtcgaactg 300
a 301

<210> 2271

<211> 298

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-C9

<400> 2271

gacgggctat cccactatgt gcatgcgcgc actcctttcg tgtttgatgg cttcttgatt 60
tatgcactgc ctagtgtaat gcattacat tccgggtgag ttgatagacc ctgtccacga 120

tcaaactgca atttgggtgc cccatttgg tcatttacct catgtcatcg cattgttta 180
 agttggagca aacttcgccg gtgcattcaa accccgtgca gccgctctac acgatccaag 240
 cttacctacc cttgcatgcc atctcataac ccttcaaaag tatcacctaa attcattt 298

<210> 2272
 <211> 448
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-059-Q1-E1-D11

<400> 2272

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 tccaccgcgg cgggtggcggg gcagctcgcc aaggagtggg gcacgtggac gatgaagacg 120
 gcgaagggtg tggcgcaactg gggcttcac cgcctcatca tcgtcgtcgg catgactaag 180
 ggagacgagc ccaaacctag cttgctccag cttctgaccc ccgtctgac caatccccgg 240
 cgagccctag actggatcga tccatctcct tttagttact actagtagat gtttttgctg 300
 tttattgaat cctggtgggt gagttcttga tccctgngtg gtgatctttt atctgatctg 360
 tgtctaataa tgttatgtgg tcggatcgat cctggattgg atcggatctt gttagatacc 420
 tgagatgcta cagatctgct attaatat 448

<210> 2273
 <211> 461
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-D12

<400> 2273

aggtacaggt ctagaattcc cgggtcgacg ggcaccaca catgatagtc ctattatctt 60
 tttgaattct cccgactaca ctatatcgga gaagtttgcg cttagtaagg attatattga 120
 tgggttgccct tttaccattg cacatgatga tgaatgtaat atgcatgtgc ttgctactcc 180
 tactttcaat tattatgaga gaggaactat atctccacct ctctatgttt ccaatacgat 240
 agaattgcaa gaaactgtta tactatgcat tggcctttac ttggtgtgca tgaattgttc 300
 ttttatgaca tgccaatgca taggaagaga gttaaacttc gttgttgcat gatatatgtt 360

actttgtgct cactactaaa ttacaaatca ttgttaatta aaattggctt tgatatacct 420
 tgggatctgg gtggatccat cacttgagca ctatatgcct a 461

<210> 2274
 <211> 344
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-D6

<400> 2274

gacggggcca agcacatctc caagatcgca gagaagaaga tcaaggccgc cggcggcgct 60
 gtcgtgctcg ttgcctaggg ttctgttcgc gaccgtgcct tgagatctat tatacttgaa 120
 ctattagttg tttcccgtag cagcaatttg tgttgaacaa gacatcgta gtttgttatc 180
 ctggttcctg tgtggtaaac caacatctta tgagaatttt gcgctatgtt atgccagttt 240
 atatcagacg agttatccaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
 aaaaaaaaaa aataaaataa caaaaacaca acggaagaa tgaa 344

<210> 2275
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-D9

<400> 2275

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 ctcgtcctca acatctccgc cggtgagagc ggagatcgcc tcaccgcgc ctccaaggtg 120
 ctggagcagc tgagcggaca gtcaccagtg ttctccaagg ctaggtacac tgtcaggctc 180
 ttcggtatca ggcgtaatga gaagattgcg tgctacgtga ctatcagggg tgagaaggcg 240
 atgcagctgc tggagagtgg cctgaagggtg aaggagtacg agctgctcag gaggaacttc 300
 agcgacaccg gctgctttgg cttcggtatc caggagcaca tcgatctcgg catgaagtat 360
 gatccatcta ccggcatcta cggtatggac ttctttgtgg tgctcgagcg tgctgggtac 420
 cgcgtctccc gccgccgc 438

<210> 2276
 <211> 410
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-E10

<400> 2276

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 gtgctctacg ggtagctggc gcaacgacgc gtccgttggg ggccgtgggt gggcctgggg 120
 tggccgggtgt ggacagcggg gagctcgggt gcggccatcg gagttcgggc gtgagcggag 180
 acgcggttgc ggtggccgtg gcgatgtgtg tttagcacct acggcgtcta cgtggtgcgg 240
 tgagtttgat gggcgcatgt ccgggaccaa atggtcaccg gagcatcacc ggagacgaac 300
 gccggcgggtg gcgcattcgg ttgcaggcga ggcgacggct atggagcatg agggaaaaac 360
 agagatgggg agcaggagca ggggctcacg atgggtgcga cgagctgctc 410

<210> 2277
 <211> 457
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-E12

<400> 2277

ggtacaggtc tagaattccc gggtcgacgg gtcagttcat gtatatctgg gtatttcgtg 60
 tgatttggtt cacattccac cagaaccatt acgaggttcc cctgatcttg cttcccaccg 120
 gaggaacgaa ctgtaacgac ccgaagactc aaatgctggg tctgcatgcg gtcagcggct 180
 cggggaagag ggacctgaga aagcacgaga cagactctgc cggcgtcgga aatcatcacc 240
 gactacgtcg gcgcagtcca catacagagt caatccctag gcccctgat ggacgaacag 300
 gttggactga acctgctgat ggttgggaga cggagctatc tagcctgctt ggatgcgcag 360
 gtgcacatgg tgccggacga cttgctgctg agcacggact acctgctgag tgctcatcct 420
 cctcagatat gatcgatgat agttgaagaa gcgacac 457

<210> 2278
 <211> 365
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-E4

<400> 2278

cctgccgaca gatgatgata tgcagaagct ggatatgctc acgaagttca tgtctcagca 60
cccggtgatg gacttcccaa gggagaagat tacttgtcca tcggatagta ttatggggcg 120
gaattatgca ctatattcag caatcgcgga gcttttctac ctttgtaaga tgccttgatg 180
aagttgctac tcatggggat cgtttgaatg gattaggggtc tgcgaatctt gccatgtttg 240
gggcaatttt tgtggtgact tccagaggaa taagggaaga ccagaggagg gggagagggg 300
aaagggattt tttgttttga agttctgtta ccagaagagc ggccgctcta gaaggattca 360
agctt 365

<210> 2279

<211> 450

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-E6

<400> 2279

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gaggcccgat gcacggtctc tctaacatta gaggttgat tcggttctcc cgacaacttt 180
tgaagcgaat aactaatctt caacatcgct ctgttccaaa gcgtctatca tgcactactc 240
ggaagaatgg ctttcgctcg tttcaatgca gtaccgcatt aggttatctt caaacttaag 300
atgcccggtc cacgtggcgt catcacaatc agcggaaaca cagagcggtc tcttcgtacg 360
gaagaatata tgggagctct agcagccgaa ccactgaatg gcctctccaa cccaagtaac 420
ccattggtct ttcgagacac ggacgcggat 450

<210> 2280

<211> 292

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-E7

<400> 2280

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agataacacc cctaggcctg catgtccgaa tagatctggt aagtatatca gggagagatt 120
gctccgggag ctgtatctaa tctcagtgc atacgcattt ggctttgcac atttcagttc 180
gggagtcctg tgggtacatg tctggctaac gtcggcaacg ctataggatc cgtgcttact 240
taggcgtgca tactacgtca tatctcttct agagtgtcaa ctaaattcag tt 292

<210> 2281
<211> 382
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-E8

<400> 2281

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agttgtgctg cctagccttg tttcctatcc tactatcata gacctttgtc aagttattac 180
cccgcctct tgaatttgca ccttatctgt gaggtgaat ggtgttaacg ttttggattg 240
tctcgatgag ttattttata atgaatggta cttaaaaaaa aaaaaaaa aaaaataaaa 300
atggaataaa cacaatcaat gatcaataag aaacgtactc ttcgtaggga agaaaaaac 360
gtgagatcta acagccgaat ca 382

<210> 2282
<211> 446
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-E9

<400> 2282

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tggaagtgtg cattgaactg gtatttgaac caagaactgt ggcaggtaaa ccattattat 120
atctccattt ggtgctgcat tgcacagacg ctcaccattg ccagatcatt agcattgatc 180
ttcaagattt tgcattggtt cctctctcag aaaaatctcc cgtaaacgaa aaagcgaagg 240
gaaacctcaa agccttccat cttagaagtg tgcattgctc gatgcagagg ctgggggctg 300

ggggttatcc tcctttttga aaaacaagac aaattcctac aattttttgc agtaacctgt 360
 ccggatctga tcagctctac ctatctataa gcagctaatt gactgcagga agtagactga 420
 gtttagaaga caattgttct actcta 446

<210> 2283
 <211> 443
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-059-Q1-E1-F10
 <400> 2283

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 ggtggttgtc agaggaggat gcgagtgtgg atgtgggctt tggttgggtc gtcggggggt 120
 ggtgagtgtg aagagtgtgc ctcttgttgg gctcaaactc caatactgac tacgctagtg 180
 ggctgggcta cgaacttctc cgcccgcatc tttttccggc taaaaacatg gaaaaacatc 240
 ccctcagagg ggaaaaaaca aatttaaaaa aatagtgtag atactcctc cgtttttatt 300
 tactccgctg attagttttg gtccaagtca agctttgtaa actttgacaa agtttataga 360
 caaaagtatt aacatatata ataacaaatt aataccatta gattcattac tgaatgcact 420
 ttcacataac atagatttgt tgc 443

<210> 2284
 <211> 440
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-059-Q1-E1-F12
 <400> 2284

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 gacggcgtcc aaggaggccg gcggcgaggg caagaccgag ggccgcaaga agggcagcaa 120
 ggccaagaag ggcgtggaga cgtacaagat ctacatcttc aagggtgctga agcaggtgca 180
 ccctgacatc ggcattctct ccaaggccat gtccatcatg aactccttca tcaacgacat 240
 ctccgagaag ctccgccccg agtccgccaa gctggccccg tacaacaaga agcccacat 300
 cacctcccgg gagatccaga cctccgtccg cctcgtcctc cccggggagc tcgccaagca 360

cgccgtctcc gagggcacca aggccgtcac caagttcacc tcctcctaga ctgacgatgc 420
gtcgccttggt gtagacagatg 440

<210> 2285
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-F5

<400> 2285

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gccaaggatg tcaccgagct gatcggaac acgccgttgg tgtacctcaa caaggtgacc 120
gacgggtgcg tggggcgcggt cgccgccaag ctcgagtcca tggagccctg ctccagcgtc 180
aaggacagga ttggatacag catgatcacc gacgcggagg agaaggggtt catcgtcccc 240
ggcaagagcg tgctgattga gcccaaccagt ggcaacacag gcattgggct ggccttcatt 300
gctgctgcca agggttacag acttgctact acaatgcccc cctccatgag tatggagagg 360
agaatcatct tgaaggcttt tgggtgctgag ctgacccca cccagccact cttgggaatg 420
aaaggagctg 430

<210> 2286
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-F6

<400> 2286

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ttagtcataa aatgctacat aaaacttgta gatcactgaa tatgatatgt ttgattcctt 180
gcaatagttt tgcgatataa agatgggtgat attgtagtca tgctagtggg tagttgtgga 240
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ttatgtaatg aagtcggagc atgatgtatt tatttattgt cttccttatg agcgatgggc 360
ttttcctacc aatctatccc cctaggagca tgcgcgcagt actttgtttc gatagc 416

<210> 2287
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-F7

<400> 2287

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 cgaccactga ggctttggag aagaagatga gtgcactgga gaaagccgag tccactgtct 120
 ttgtggcgtc agggatgtat gcaagcgtcg ctatgctcag cacacttgtc ccagcaggtg 180
 ggcacattgt tacaaccaca gatttgtacc gcaagacaag aatttacatg gagactgagc 240
 tccccaaagag gggaattacg atgactgtta ttaggcctgc tgacatggat gctcttcaag 300
 atgcacttga taataataat gtatctttat tcttactga gactcctact aatccatttc 360
 tcagatgcat tgatattgag cttgtctcca atatgtgcca taacaaggga gcattgcta 419

<210> 2288
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-F8

<400> 2288

attccccgggt cgacggggca acggattcat cccaattgct gagtacggat tggagtttac 60
 caaagactcg aaagagggga agaaacgggt gccggtgaga ctattataca gtgggaagaa 120
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 taccggcagc caccgcccac ctgtggcgca tacacaaatt cccgtttact ttccatgggt 240
 acattcttcg atcctgctat gtccttgctt gtcagttacg atgctgtaac agctgtttcg 300
 tcgatgacag tcatgggcat ttggggattt gtggatttgg agctagaatt agcactgacc 360
 tgatgatggc gccacacgag ctaactatgt gctgcatggg gcagtgtgtg ttt 413

<210> 2289
 <211> 411
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-F9

<400> 2289

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ccgtctccga gggcaccaag gccgtcacca agttcacctc ctcataagact gaagatgcgt 180
ccgtcgcttg tagttgggtc ctgtatctgc acctgtactg tcgactctgc ttgtctctct 240
gcaagtagtg ctggtagtct gctgggtgat cgccaatgct ttggtggcta attaattggg 300
tgtaagaact gaagttgttg tgtttggcag actgatatat ctatctagaa ctgaacttgt 360
ggtggtactg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa gcggccgctc t 411

<210> 2290

<211> 449

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-G10

<400> 2290

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tcgccaagaa tgctggtgac aacggcagtg ttgttaccga gaaggttctt tctaacgaca 120
acttcaagtt cggctacaac gctgccactg ggcagtacga ggacttgatg gctgctggta 180
tcacgcaccc cactaaggtg gtgagatggt gcctggagca tgccgcgctg gtggccaaga 240
ccttcttgac gtcggacgac gtgggtcggt agatcaagga gcccgagcc gcgcccctcg 300
ccaaccccat ggataactcc ggctttggat actgatgagc aacacaggcc gagtttctcc 360
tgacgacgtg gattaatttt tggtagcatg aaccaagttt tgagagattg atgatgatga 420
tgatggtagt tttgagataa gaaaaatgc 449

<210> 2291

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-G11

<400> 2291

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 gcctccatga cacgcgggac atctagcatc aagggtggcgt gtcatgcaag aaaatggaga 180
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 tttctccacg atggcacgtg aatagtgcac gtactcaatg acagagcatg ggatggtagc 300
 catggacatg gccggccctt tttgaagaga gtactaataa atacgtaact ttgatgtgtc 360
 acgtcaactc gcagaacgac gagaagcttg cttactacgc cttctccctc gccaacgtgt 420
 gcgcggtggc tcgcagcacg aagag 445

<210> 2292
 <211> 387
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-059-Q1-E1-G12
 <400> 2292

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 caggactcct aatggccagg tttaatcct tcacaatgct tgtaaacatc aaccccatct 180
 aattgtggtc agatcttacg tggatcatag cacatcgata cctgataact tcttgacgct 240
 ggtcctcatg gtcggtaaga tctcctagac caaggctgtt ccctgtcacc aacacatgca 300
 taattcgata tttggacatg tttacacagc acttgatgag tttctcgcga gaaattgtca 360
 taacttatga tatgattaac caagttt 387

<210> 2293
 <211> 382
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-059-Q1-E1-G3
 <400> 2293

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cttttctttt gtctgcatgg cacaaactat atgagtcacc agccgctctt tccacttcaa 180
 ttgtactatt ttgttgtagc aaatgttagc taatgcaatc tccattccgg ataaaaaaaa 240
 atatggaaaa acttataaaa aacatcaaac tcaccaaaaa aaaaatcaat atgtaaggca 300
 atgaaaatta taaaccaaag cctaaaaaaaa aaaatcggcc gctctaaagg ttccaagctt 360
 acttacccctt gaatgagact tc 382

<210> 2294
 <211> 388
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-G7

<400> 2294

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 gctggagtta tagattgtgt tatctcgatt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaagaaaaaa aaaataaaaa aaaaaaaaaa 240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaagg ggacgcccac 300
 aaggattaaa ctttaaatac acttgaaaag caagaaaaac cacttcaaaa aggccagcta 360
 aattaaaatt aagggccggt gtttttaa 388

<210> 2295
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-G9

<400> 2295

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 gaggatacag aagaggggca aatgatgact tcatggttta tggacaggac aactcaatgg 180
 acaggaggag ctcttggac ccccttgccg aggcgcatta caagagaccc actcctctag 240
 aggaaaagaa gaatgtgcac agtatgggag atgagtcctt catgatacct gttacctcca 300

actcacagga taatcttggga gcagccggcc gtactgccat tgacatagat gccgagcttg 360
gctcaagtgt tcagaaaaca tcagatgcta aggctggagc tgaacttttc tatg 414

<210> 2296
<211> 443
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-H1

<400> 2296

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tatcacgggc agttaccagg ccgaaacata tctcgggcct tagttggccc actaatatca 120
tgggccttta ataggccgaa agcttagtac agacatcaac gggccgaatt gtgcgacaag 180
cctttaacaa gcccaaagtc acgttgggct taactgttgc cacctttatc acgggccatt 240
agtgggcca atgtcctgtc aggccatata tggcccatgg gaagcacggg ccattcctaa 300
gacgaaagtc acaccggact gaaatgggcc catgtctaca tcaggcctct aacaagccga 360
aagtcactcg gctataattg gcccacaaata ttcaacgaac aattaatggg ccagatctgg 420
ctttgggccg taaatgggcc caa 443

<210> 2297
<211> 442
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-H3

<400> 2297

cccgggtcga cgggatgaca caggtcacca acatggatga ttcaattcat gggacctttt 60
ggtgcagttc acctaaaatg aagcaatgtc ccatgagcta gcaacttctt cttcttcttt 120
ctttaagaaa tgggctcaag cccaagttca atttccgtca gaaaacgaaa cccacagagc 180
ttcttcatta gttgcaataa aattgagcaa catcaagggt ggtcgtgaag ctctgaaaa 240
gtaggcggac caggacagtt gcatctctaa cgaaaagaag caacttatct taatgggaaa 300
tttagcagga gatgaaaaaa gtgccattga ttcatattac tggaggcatt acattgaaaa 360
caacattggt ttaacgtgtc cttactttta acagtgcgac tgctacattt ttacagtggc 420

attacataag agtggctcgg gg

442

<210> 2298

<211> 452

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-H5

<400> 2298

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tcaaggtgca gaagctcgtc ctcaacatct ccgtcggcga gagcggagat cgcctcacc 120
gcgcctccaa ggtgctggag cagctgagcg gacagtcacc ggtgttctcc aaggcgaggt 180
acactgtcag gtcgttcggt atcaggcgta atgagaagat cgcttgctat gtgactatca 240
ggggtgagaa ggcgatgcag ctgctggaga gtggcctgaa ggtgaaggag tacgagctgc 300
tcaggaggaa cttcagcgac accggatgct ttggcttcgg tatccaggag cacatcgatc 360
tcggcatgaa gtacgatcca tctaccggca tctacggtat ggacttcttt gtggtgctcg 420
agcgtgctgg gtaccgcgtc tcccgcgcgc gc 452

<210> 2299

<211> 373

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-059-Q1-E1-H6

<400> 2299

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ctatcccatg atctgcccga gtggctttat ctgtaatctg tctgtttgaa tctttgcttt 120
tggtgtttgt tttacaacct gttgtgttgt aagacccttg tatctttgaa cctgttatgc 180
accttggtta atatgcatgc tatctgggta tctaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaaggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaagc 300
ggccgctcta aaggatccaa gcttacttac ccgtgcatgc aacttcatag ctcttcaaaa 360
gtgtcaccta aat 373

<210> 2300
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-059-Q1-E1-H7

<400> 2300

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 tcaggcagcg agaggcagca ggataggccc gacagcaggc agagtggctg ggatggctgg 120
 gataaacttg ggaaggctga taggtcagaa tcaaaagaga ggcagtagaa ccatggcggc 180
 ttcttctggt ccgttgctct gttttgttgt atatgcagta gctagcccgc gtgtttccga 240
 acctacctac ctacctgatg cgctgtagcg attagcatcc tgcctgaact gtgtcatgtg 300
 gtagaagaat tgtagcttaa agcatcatgt gcatcctact cttgtgtttt ctttcttgcc 360
 ttggaaccaa actaatacat tttctgaata aatcctgatg tcggagatgc aaaanaaaa 419

<210> 2301
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-059-Q1-E1-H9

<400> 2301

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 aaaaaaaaaac cacaatccct gtcctctcct ccgccatcg caccgccacc tcctcccgtt 120
 cttctccggc cgccgectca gacttgggtg ccgctgtgtg ccacccgcag gagccgcaga 180
 tggcgtcttc gacgtccacc ctagagatcg aggctcgca cgtggtgaag ataagtctgc 240
 agttctgcaa ggaaaactcg cttcatcaga cgttccagac cctgcagaac gagtgccagg 300
 tctcgctcaa cacggtggac agcatggaca cttcatcgc cgacattaat gctgggctgt 360
 gggatgccgt gctgccgcag gtttccagc tgaagctgcc gcgcaagaag cttganggac 420
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<210> 2302
 <211> 398

<212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-060-Q1-E1-A1
 <400> 2302

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 caccctgtt tttgtataac taatagaact ctgcgatttc cttttcgtgc ttgggttcct 180
 tcgtgtttgc cttaacgttc cgcacgga gggcccgcc ccgtgcatac ctgcactatc 240
 gttggggcat ctggatcacc aagacgagaa caaagggtga aggggtacgt gactttgtaa 300
 acccctgagt caagatgtc aaagggttc ctttacgtac gaacaacctc aatgttctgt 360
 gttagtanag cccaaaccg tgcatactc gactaccg 398

<210> 2303
 <211> 446
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-060-Q1-E1-B10
 <400> 2303

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 aagcaagagt ccttgcaaac caaagaatgg attttgtttt ttgggatgtg gctaacaat 120
 caaaaggaaa aacatgttga tgcagcagca ggtacctgtt ggtgctttgt gcgtgatgta 180
 caagaacatg cctatatgtt gttatcctgt aaaacatcgg aatgacaatg ctatattatt 240
 tataatatgc aattcatagt tttgttgga ctagtaactg actccgcgaa gacacttcca 300
 ttgatatgat ttttagggac atgtattgcc aattagtctg ctgctatatg ctggagtaat 360
 tttctgggaa tgcacttgat ggtatattac taatgtgcat tcagcgataa cactctcctg 420
 cacaatctgc agggctcttt gtgcac 446

<210> 2304
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-060-Q1-E1-B2

<400> 2304

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tcgttggtcg tcgccggcag agccgcacgc tgetgccgat tcagtccacg taatcaccgc 120
ccttaaattg attcttgagg cagatgaatc aagccccgcg ccccgatgtc aaccaaagct 180
cccgatgagt cacatgcgca acaatcggct tctctctcaa gaatcacctg caccaaagga 240
agcctttttc agaagaacat ccctgtccg tctccaggca ctttctctat ggccgcaagt 300
tcggcaagtt tctctcacct acgattctc tctaactgaa gcacgatccg caagaatgtg 360
tcaacatccg atggatcatg atgatctctc tgattcgggtt ggttttgatc ggaaacgata 420
gatggttcaa aact 434

<210> 2305

<211> 499

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-060-Q1-E1-C5

<400> 2305

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tttcgggtct agaatttcag ctgccggtat tctcctctt tgtgtaaacc ttgcatatta 180
tgagagaaaa ggcattagaa ttactccata aagtgttata aaggataaaa acattataaa 240
taacattatg aaaacatgat gcaaaatgga cgtatcaatg aacaatctga tcataaacac 300
acaattcata ggatcccaac aagcacactg caaaagaaaa ttacatggaa tagaactcca 360
agaatatcga agagaacatt gtattgaaga tgaaagagag agaagaagcc atctagctac 420
tagctatgga cccgtaggtc tgtggtgaac tactcacgca tcattggaag gcagcaagga 480
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<210> 2306

<211> 204

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-060-Q1-E1-E1

<400> 2306

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tgttgctggt gttgttggtg ttgttggtgt tgttggtggt gttgttggtg ttgttggtgt 120
tgttggtggt gttgttggtg ttgttggtgt tgttggtggt gttgttggtg ttgttggtgt 180
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<210> 2307

<211> 515

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-060-Q1-E1-E6

<400> 2307

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caggagtctg agcactagtc ctgatgatta caagaggcgt ggcagagaca gaagtcctag 180
tcgtagcagg agccgcagct acagtcctga tgatgacagg aagggtggca gagacagttt 240
gtcgcccgca cgcagaagca ctagtcgctc ccctcgcaag acaccacctc ctcgcaagac 300
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ttcaacatga gctgaatgtc aaacaactga ggatcaatgg aacagagctg ctcatattgg 480
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<210> 2308

<211> 526

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-060-Q1-E1-F5

<400> 2308

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aacatataac tatctgagtt gcagatgcat agattagtat gtcgaactaa gttcaacata 120
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 aactcatcaa gaacactttg gctgtgatct ttcggttcaa caaggaactt ctgccataag 240
 aagctcatgg tatttggaag aaataaatac cacacacctt gaggactatc gcaaaggtta 300
 ttaataacct aaaggaatga gcaaacta acaacatgag gtaagtaggg tgaatctcgg 360
 gttcaagaac ccaggagtag aatacctact actaaatggc ataacgggat gcttaggaga 420
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<210> 2309
 <211> 515
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-060-Q1-E1-F6
 <400> 2309

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 attatacgca ccctttcacc cttocatcat tgctagactt tcttgtgccg cgcaactttc 180
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 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-060-Q1-E1-F9
 <400> 2310

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cgcacccttt cacccttcca tcattgctag actttcttgt gccgcgcaac tttcgccggt 180
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gcattacttt tgtcatattg ctctttgcat gatcatgtag ttgacattgt atttgtggca 360
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gc 422

<210> 2311
<211> 391
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-060-Q1-E1-G1
<400> 2311

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agcaggtgat aattgcgggc ggaacaaga aggccttggg aattcccccg aagggaaccc 180
aacgaaaatc aatcgacttc ccggggcctc gaaccaagcc gctaaccctc aaggatttct 240
ccggcgacgg tctgactgat atcaccctgg tgaacatcgg ggggattgta cgggtttgtg 300
cagacaaagg aaccggggg ccctcttctt cagcacgctt gtcggcttct tgattgttgt 360
gatcggggtg atctttgtct ctctgcaact c 391

<210> 2312
<211> 439
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-060-Q1-E1-G9
<400> 2312

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agatgacagg aactgggtcat tcacatgggt agtcataaaa tctacataa aacttgtaga 120

tcactgaata tgatatgttt gattccttgc aatagttttg cgatataaaa tggatgatatt 180
 agagtcatgc tagtgggtag ttgtggattg tagaaatact tgtgttgagg attgtgattc 240
 ccgtagcatg cacgtatggt gaaccattat gtaacgaagt tggagcatga ggtattttatt 300
 gattgtcttc cttatgagtg gcggtcgggg acgagcgatg gtcttttcct accattctat 360
 ccgcctaagg gcatgcgtag tagtactttg cttcgagggc taataaactt ttgcaataag 420
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<210> 2313
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-060-Q1-E1-H10
 <400> 2313

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 gagagagctt tttatagcga ccaagtatgg gctacatatg acagtgagga tggaatgcct 180
 cgtctatatg caatggtgca gaaagttctt tcaatgagac ctttcacaat ccgcatgagt 240
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 cacaaaacat gtggcgattt taggggttga aggtaccaga ttaccgtaac agtcaacata 360
 ttttcgcaca aagtcagctg gactaaaggc ccccggtggga ttatcagaat tattc 415

<210> 2314
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-A10
 <400> 2314

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 tattagagag gctagcaatg gtggaagggt gagagtgcgt ataattccatg gactcaacat 120
 tagtcataaa gaactcacat acttattgca aaaatctatt agttatcaaa acaaagtact 180
 acgcgcgatgc tcttaggggg atagattggt aggaaaagac catcgctcgt ccccgatcgc 240

cactcataag gaagacaatc aataaataaa tcatgctccg acttcatcac ataacgggtc 300
 accatacgtg catgctacgg gaatcacaaa cctcagaaca agtattttctc aaattcacaa 360
 ctactcaact agcatgactc taatatcacc atcttcatat ctcaaaacaa ttatcaagta 420
 tcaaactttct 430

<210> 2315
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-A12
 <400> 2315

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 attgcgcagt tcgctgagcg gaatccggac gtgctgttcc tgcaagtcaa ctacgagaag 120
 cacaagtcca tgtgctacag cctccatgtc catgtcctcc ctttcttcag gttctacagg 180
 ggagcccagg gcaggggtcag cagcttcagc tgcacaaatg caaccatcaa gaagttcaag 240
 gacgccctcg caaagcactc gccggacagg tgcagcctcg gcccggcgcg ggggctcgag 300
 gaggcggagc tcttggtctt ggccggcaaac agggacctgg aattcaccta caacgagaag 360
 ccgacgctgg tgccgatcgc cgaggctatc cagatggaag ctgcctccat tggcggccca 420
 tggatgccat tgtc 434

<210> 2316
 <211> 331
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-A2
 <400> 2316

ggtcgggaaa tcacgggtcg accggatccc gcggggcaga gaaaacatga gccctggcct 60
 ggaggctgaa gcacgggact tggctgaatc tgaattagca tggaccaaca aatcaggagc 120
 gaaccgagtg aaagaattct aggaaaaggg cagggtctct gaagacagtc ctaagctatt 180
 ctgtaactac cttaaaacgg tgtgctctgt atgcttgtaa aagtaacatt gaccgcattt 240
 tttgtggagg ttgaaatgag aggagctaga aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300

gcggccgctc taaaggatcc aagcttactt a

331

<210> 2317

<211> 137

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-A4

<400> 2317

gggtccggaac tcacgggtcg acgggcagat aaatcgggaat agtctgacaa atcgggttttg 60

ctcttccccct tattcataaa ggcaaattca tccttggtgg tatgcttgga taaaacaact 120

gggttgacctg gggcggt 137

<210> 2318

<211> 489

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-061-Q1-E1-A8

<400> 2318

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tatatatagg cgaaggaggt aggccagagg agccatgagg ggcccacgag ggtggggggt 120

ggcctacccc catagggcgc gccctcctgc ctctgttccg cctcggctgc ttcttgacgt 180

ccactccaag tctcatggat tgcgtttggt ccaaaaagat cgctcccaaa ggtttcattc 240

cgtttgact ccatttgata ttcttttct tcgaaacact gaaataggca aaaaaaacag 300

caattcaggc tgggtctccg gttagtaggt tagtcccaaa aatgatataa aagtgtaaag 360

taaagcctat aaagatccaa aatgggtaat ataatagcat ggaacaatca aaaattatag 420

atacgttgga gacgtatcaa gcaccccaaa gcttaattca tgctcgtcct cgagtangta 480

aatgataaa 489

<210> 2319

<211> 306

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-B1

<400> 2319

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gtatcgggtt atgcattgca attgcaactc tgacctgctg cgaatgttcg aactgatgag 120
gtttatgcat tttgaacttt atagtaatgc tatttgcattg ctttcaaatt tggaaaaaaa 180
acaaaaataa aaaaaaaaca aaacaaaaaa aaaaaaaaaa aaaaaaaca aaaaggaaaa 240
aacaacaaa aaaaaaaaaa aaaagcggcc gctctaaagg atccaacctt acttaccctg 300
gaatgc 306

<210> 2320

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-B10

<400> 2320

aattccccgg cgcacgggga caatagacac acccaagtcg ctaagcattt tcatccgggt 60
ttggcgcttc acattaagat tcttccttat ctatatgagt ctgtttgcat ggtatcgacg 120
tttggttgga attaaagggt ctcagcattg gctccaacgc ttcaagctct tatctaaatt 180
atcatcgagg gccatttacc attcaacttg ctcaacagtg tttttccact gggatgcaca 240
atgtgtgttt gactaatagg atatccttgg tgctgatcta cgtagtgatt tcaacatcat 300
agcagtataa tgtccaagct gtgtgtctca tcaacctcct ctgccacggc ttcactctca 360
ccctgagcat cctcttcctc tgggtccaacg gctctgccat cggatccaag tttacttcca 420

<210> 2321

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-B12

<400> 2321

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caggctcacg agcgcaagg cgacgagagg gagagggggc cgagcaagaa gacgcacctg 120

acgcggccaa cgctagcgga gcgcgcgcat tgcattgtcaa agctcgtgtt caccgtgtgc 180
 actggtgcac acagtggcac acggcgggcc aaacaatgtc tgggggcttg tccttcctgg 240
 ggaggttgca actgcggtgg tagtttggtt aaaagtgaca tggttaaatg acagttaaca 300
 cctgaagttt actgcagtaa acttgatcgt gtactgctgc tcaacaggga ggtgatttgg 360
 tcaaattggag ttgtctggga ggttgagta aagaaggact tacatcctgg taactatgga 420
 ggggtttgga tcaagattta acag 444

<210> 2322
 <211> 243
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-B2

<400> 2322
 gtcgaccggg cactaccact tagttcaact tctccgcca cgcccagcga ggacgagact 60
 gacgacgaga cccgagagag gccgagacct ggaagatccg aatccatcgc cgctcccca 120
 cgcaacgaga tgtcttcacc cgcagagtac tacaattcac ttccaccaat aagcaaggca 180
 tatggaacat tgtgtttctt tacacagtgc tggttcagct ccagatacta gaccagggc 240
 ttc 243

<210> 2323
 <211> 120
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-B4

<400> 2323
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 gcacggcgtg caaaagaaaa ctcacggccg cgacatatat ttaccacgtt ttattatttt 120

<210> 2324
 <211> 432
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-B9

<400> 2324

tcccgggtcg acggggacag tagagttgac tagtgccgat ttcctccatc tccatctcca 60
gctccggctc ccagatcgag acggcggcgg cgatgggcgc gcacccttac gtgccggcga 120
gcctggacct cccgggctac gtgccgctgc gcctcaccca gctcgagatc ctggggacct 180
acctcggcac ctccctcttc gtctcgtcg ccgtctgggt cctctccggg agatgccgca 240
ggttgctcgg gaccgaccgc ctgctcatgt gctggtgggc gttcaccggc ctcaccaca 300
tactcatcga ggggcccttc gtctttaccc ccgatttctt caccaagacc aacccaact 360
tcttcgacga agtctggaag gagtacagca aggatgactc caggtagctc gccagggaca 420
ccgccaccgt ca 432

<210> 2325

<211> 425

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-C11

<400> 2325

aattcccggg ccgacgaacc taaaaatggt gagccggctg ccataaagcc agaggcggtg 60
gagcatgatg gtacagaagc cgatccaagt aaagaagcat ctatacctcc tcaagaggaa 120
accactgctg tagccttggt tacaggaccg gaacaaaatg aagaagcaga tgcacctact 180
caagtcaaac cagttgctgt tatacctggt acgggaccag aagagaagaa agtagaggca 240
tccaccaag aggataatgc tgaagcagtt gccgcagagc cagaatctgc tagagcccag 300
gaaaatgcgg aagcttctac tcagcctagt cctatggaga tagagtcatg tcaggaaaca 360
gctatgctgg gagaagctga aaccaggcag caactgccac ttccgtctgc cgagggtgtg 420
gtggc 425

<210> 2326

<211> 329

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-C12

<400> 2326

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atgcagtctc ttggatggct tggataatgg ttatggtgaa ataactcagt tgtaaccatg 120
tctcatgttc ttctgaattc catggaaaaa aaaaaaaaaa aaaaaaaaaa aataaaaaac 180
ataaaaaaaa aaaaaaaaaa aatctaaaaa gaaaaaaaaa aaaaaaaaaa aaagcggccg 240
ctcaaaagga tcaaacctta cttaggcgtg catgcaactt catacctctt caatagtgtc 300
acttaaatta atttcatggg ccgtctttt 329

<210> 2327
<211> 429
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-C9

<400> 2327

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atgcttctag tgtatttgtg ctaaactagt gtggactcat gcaccctcca tacactctac 120
caaacaccca aaaggaggtc gagaaggga ctcttgggcg gcatttgtct cttactacgt 180
actaccacta aatgtttag gtgcaatgca cggatgatgt atggagtacg tgcctaagta 240
ctctactact acggtattag ttggaggcac atattaactt ttatatttgt ttacgtgtat 300
gccccgagac cttccaacta gacgtgtctt tctctccatg tcgcactttg tatcgttcat 360
acctctaagt actactacgt gtggtctccg acccagaagt ggaagaagtg gagatgctct 420
accatgctg 429

<210> 2328
<211> 428
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-D10

<400> 2328

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gggatcatgt ccgacgcaa catcctcate aacaccgccc gcctccacgc ccagcgtac 120
gcgctctcct accaggagcc catccccgtc gagcagctcg tccagtcctt ctgcgacacc 180

aagcaggggt acaccagtt cgggggcctc cggcccttcg gcgtctcctt cctcttcgcc 240
 ggggtgggaca agaaccacgg ctccagctc tacatgagcg acccctccgg caactacggc 300
 ggctggaagg ccgccgccgt cggggccaac agccaggccg cccagtcctat gctcaagcag 360
 gactacaagg acggcatgac ccgcgaggag gccgtcgccc ttgccctcaa ggtcctcagc 420
 aagaccat 428

<210> 2329
 <211> 425
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-D11
 <400> 2329

aattccccgg cgcacggggg agtaaacgcg ctctgcaagg agccgggtgcc gcagatcgtg 60
 gcgcgccccg tgcccaacga catattggag tggcattttg tacttgaagg aagtgtagcc 120
 acaccctttg aaggtggata ttactatggg aagcttaaat ttccctctga ttaccctttt 180
 aaacctccaa gtatcagcat gacaaccccc agcggcaggt ttgccccctca caaaaggata 240
 tgcctatcaa tgagtgattt tcatccagaa tcttgaatc ccatgtgggc tgtagcaagc 300
 attctaacag gactcctctc atttatgatg gatgatgctc ttacaactgg aagcatcaga 360
 agtacagatg gagagaagaa gcgttttagca aaggcttctc ttgcgtacaa ctgtgagagc 420
 aaaaa 425

<210> 2330
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-D12
 <400> 2330

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 ggggtcttcg tgcagcggcg gcagcaacat cagcttccat tgaggccaaa gtgttcgcca 120
 gaattgtcct taggaatctg gaacaccatc aggcaggac ttcaacctga aaacacaatg 180
 gcgagcacia gcgcgactaa ttctccaaca gggtagcact tctaaccttt ggccccagaa 240

tggatgcaaa ctgcggtta agttgtcgcc ggcatTTgaa gctgccgcgc aagctgtgac 300
 cttggaactt ccaccttggg gagaactgtc agaagagatg aatgaacgtt caaccggcag 360
 ctgttgagtg tgcaattttc ctgttgtttg tctgatgtgt aaaagtaact taaaaagtg 419

<210> 2331
 <211> 466
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-D6
 <400> 2331

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 gttgctgttg ttgctgctgt tgttgctgtt gctattgctg ctggtgttgc tgttggtgct 120
 gctgttggtg ttgctgttgt tgctgttggt gttgctgttg ttgctgttgt tgtagctatt 180
 gttgttggtg ttgttggtgt tgttggttgtt gttgttggtg ttgttggtgt tgttgctctt 240
 gttgttggtg ttgttggtgt tgctgttggt gttgctattg ttgttgctgt tgttggtggt 300
 gttgttggtg ttgttggtgt tgttggttgtt gttgttggtg ttgttggtgt tgttggtggt 360
 gttgttggtg ttgttggtgt tgttggttgtt gttgttggtg ttgttggtgt tgttggtggt 420
 gttgttggtg ttgttggtgt tgttggttgtt gttgctgttg ttgttg 466

<210> 2332
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-E12
 <400> 2332

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 ccccgtaggg ttgcgtgag gattgcccgc aggaggaacg atgaggagga cgccaaggag 120
 gagctctact cactcgtcac cgttgccgag gtgcctgctg aggggtttgaa ggggctggga 180
 accaagggtcg tcgatgacac tgagtagact cttttcttta tctacatcgt tagaatgagc 240
 tgttatttgg aattgcacca gcatgctttt tgtatccccgc agaagttttg gagtatggaa 300
 tatcgggagc tatctatttt ccttcatcca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa agcggccgct ctaaaggatt 420
ca 422

<210> 2333
<211> 420
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-F11

<400> 2333

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gaatactatg agaagttgga tgcttgataa tttttttgag atatgaggat ggtgatatta 120
aatttgtgct agttgagtag ttgtgaattt gagtacttgt gctgaagttt gcaagtccca 180
tagcatgcac atatggtaac cattgtgtaa caaatttgaa acctgagggtg ttctttgatt 240
gtcttcctta tgagtggcgg ttggggatga gcgatggtct tatectacca atctatcccc 300
ctaggagcat gcgtgtagtg cttgggtttt gatgacttct agatttttgc aataagtgta 360
tgagttcttt atgactaatg ttgagtcctt ggattattcg aactctcacc cttccatcat 420

<210> 2334
<211> 353
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-061-Q1-E1-F3

<400> 2334

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atccccacag aaatccccat ctcaaaaccc tagcccggtc gatcccggtc agatggccaa 120
cccaggggtg ttcttcgaca tgaccgtcgg cggcgcgccg gccgggcgca tcgtgatgga 180
cctgtacaag gacnccgtgc cgcggacggt ggaaaacttc cgcgcgctct gcaccggcga 240
gaagggcgtc ggcaaaaccg gcaagccact gcactacaag ggcagctcgt tccaccgcgt 300
gatccccgac ttcacgtgcc agggcggtcga cttaccaag ggcaacggca ccg 353

<210> 2335
<211> 500

<212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-061-Q1-E1-F5

 <400> 2335

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 accactagat tgggttttcag gacaaccagt cacagatgag catggacgcc ttcagattat 120
 aaagaatgat gacctcgaag agctccaaga actcggttct ggaacttttg gaactgtata 180
 tcatgggaaa tggaggggct ctgatgttgc aataaaaaga atcaatgaca gatgttttgc 240
 tgggaagcca tctgagcaag aaaaaatgcg gaatgacttc tggaatgaag catctaacct 300
 tgctgatctg caccaccca atgttgtggc cttttatggc gttgttctag atgggcctgg 360
 gggatccatt gcaacgggtta cagaatacat ggttaatggc tcacttagga cggctttgct 420
 gaagaattcc aagagcctgg atcgacgcan acggctaatt attgccatgg acacagcttt 480
 tggaatggag tatctgcata 500

<210> 2336
 <211> 434
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-061-Q1-E1-F9

 <400> 2336

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 ggtctttcct ttttcatttt atattogttt ttcttttttag ttgttttctg ttttctattt 120
 ctttttaaaa taaattcttt tataaaatat aaaacttgca cctaaactag tataataaat 180
 tagaccacca ccacaattag tttagcattt aaataaatta gtttagaatt tttataaatt 240
 aaaaagcatt taaataattg ttttagcccc tatttttaa atttatgggc acttagacac 300
 attataaaaa tgttggttca ccaccataat tagttatggg ttattttcca cgtgatgaat 360
 atttttagtat tcatgtttgt gtatttcttt atttcactta caatttgaat ttgaattcaa 420
 gtggaatttg aaat 434

<210> 2337

<211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-061-Q1-E1-G1

 <400> 2337

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 tgtgtgcatt cataaagatg agtgtatgca cgtatgtatg agcgcttgcg cctgtactgt 120
 gttaaaaaac aggagcctag tttcccaacc cggctcaaca catttccgac gaaggccaac 180
 ccggagacca aacaacatga ggcgtttctc cgatggccct cgtctgctgc ggccccctga 240
 tgtcatctcc ggccacggct cctaaaagga cattgacca cgggctccgc taccaagccc 300
 gccttcggca acagggatct cgatgcttgg cggagcgaaa caggttttct ttgtcgcgtc 360
 gtgcgaaagg ctggactcgc cagcgtcgcc gcccttcctt ttgcc 405

<210> 2338
 <211> 433
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-061-Q1-E1-G10

 <400> 2338

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 ttcaaagggt catctccgaa gaggaagggc ggaagctttt ggcagaaatt cacgccggac 120
 tcggcgggcca ccacgccgca gcccgggcca ttgtaagcaa ggccttcgta caggttttta 180
 tttgttgacg gcccggttag atgcacatga catggtccaa tgatgtgtcg gttgccagct 240
 tttttcaaac caaagccaca tgccaccac cgccctccaa acaatcccca ttatctggcc 300
 cttcacggtc tgggggcttg acatggttgg accccttaaa gggggaacc ataagaaaaa 360
 aatacttact ggtcatggtg gataaattca ccaaatggat agaagacaaa cctgttaaaa 420
 cggccgaatc ggg 433

<210> 2339
 <211> 221
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-G5

<400> 2339

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaccc aaaaaaaaaa 120
acaaaaaaaaa aaaaaaaaaa ccggccgccc aaaaggatcc aacctaactg caccgtgcat 180
gcgacgcca accccttcaa aagggccacc aaaatccaat t 221

<210> 2340

<211> 424

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-061-Q1-E1-G9

<400> 2340

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gcactgagga ggaccgagac ctcagcacca ctgtgctacg aagacatgca tttgcatact 120
tgacaaaagg gggcgggtacc atatctgagg gtcttgttgc tgcacgtca cctgtggact 180
tgcaaaataa actgcaggag cttatcgaat cagagcatcc tgggtgctgg tggaaactacg 240
ccatcttctg gcagctttcg cgcacaaagt ctggtgatct tgccttggg tggggtgatg 300
gctcttgccg tgaacccaat gatgctgagt tggcagctgc tgcttctgca cgcaatgatg 360
atgccaaaca tcggatgctg aagcgtgtac tgcancagtt gcacaaagca tttggtggtg 420
ctga 424

<210> 2341

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-H1

<400> 2341

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gcagcatgag gttggtagcc cgaggggtgt cagagaaaac tgctagaccg tcagcaccat 120
caatagcagg ggaaaaaatt gggatatgtt caacatctgt agtcagcctg agcagagcac 180

tgtatggttc aggcacaaca ggtggatctg aactggcgtc atgctgagaa ataaacagag 240
 cgggtgaaaa gtagtgaaca tatttagttg gctgagtagt gataacccac atgtataggg 300
 gatcgcaaca attttcgagg gtagagtatt caacccaaat ttcttgattc tacacaaggg 360
 gagccaaaga atattctcaa gtattagcag ttgagtcgtc aattaaacca cacctagata 420
 acttagtata tgcag 435

<210> 2342
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-061-Q1-E1-H10

<400> 2342

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 ccggcggcga ggggaagacg aggggcagga agaagggcag caaggccaag aagagcgtgg 120
 agacgtacaa gatctacata ttcaagggtc tgaagcaggt gcacccagac gtgggcatct 180
 cctccaaggc catgtccata atgaactcct tcatcaacga catcttcgag aagctcgccg 240
 gggagtcggc caagctcgcc cgctacaaca agaagccac catcacgtcc cgggagatcc 300
 agacctctgt gcgcctcgtc ctccccgggg agctcgccaa gcacgccgtc tccgagggca 360
 ccaaggccgt caccaagtgc acctcctcct agacaactta ggcttgatcc tcgtcgcttc 420
 atgcgttctg 430

<210> 2343
 <211> 353
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-061-Q1-E1-H3

<400> 2343

ggtcgaccag gcggaagagc ccaagngagg agctnnagga actgaatatc tagtgcaaag 60
 ccgctttggc cgnntgctga agatgnaaga gcattccaag tgacttttga gccgcgaaga 120
 aaatgggtgat ggtggctgag gaataaggaa attgaggatg atgatactga ggatggtaag 180

gattctgtca agccgcattc ttcaccaaga aggaaaaggt ctggtgggaa g gatgaagat 240
 gatgataacg gtgatgatga tggatgatgat gatgagaagc ctcaatcaaa g gatagatca 300
 atttgttctt gccgatctgg taccttttct gcttgggcca agaaggaaaa taa 353

<210> 2344
 <211> 118
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-H7
 <400> 2344

atcatcgctg ctcaaaacgt tccatcctta aatttactcg cattgcacgt cataccccctt 60
 ctcaaatgt cacctaaatt cagttcacgt ggccctcggt tcacacttcc caacattt 118

<210> 2345
 <211> 443
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-061-Q1-E1-H9
 <400> 2345

ggtaccaggt ctagaattcc cgggccgaca ttcgcccga ggaaagcaat gagcgtgctt 60
 tcctatttag ggtcgagagt ggcactgatg gtgaaggtag caccagtgcc atcctctttg 120
 gtgggcaccc tcttggttcc tggatggagct gccattgtct tcttgcaactt gccggtggag 180
 ctgatggtg cgtcctcgac ggtagcgcag cactccgaag aggtgcgctt gccagagcgg 240
 gcatcagaac tcttgccgga cttggtcttc ttcttcaccc cgggagcttc aacggaaggt 300
 gatttgcat ctgctgcggc tgcgtcttcc cggtagatct tgcggcgca aataagagca 360
 tccttcttgt cgccaggac agagatgacg cttatcgggc ctggcatctt cagcatgttg 420
 tatgcatagt gagaggctac caa 443

<210> 2346
 <211> 423
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-062-Q1-E1-B7

<400> 2346

ccgggccgac gggaatcaga catgatgaca tcgaggcgca caaccagac ggtctttcag 60
tttagagtag cattttttgt acatttttat ggatatattc ggttgattga tcacgcttgc 120
tgatcaacgc caatctgatt tgttctatga cctcttgata ctttttacc ctcagtaatt 180
caggccattg tctcccatgt aagaacgaga tgccctacag aaagtcagtg ggcacataat 240
cttggtgctc acgtgttgaa tatgttctgt ggcgcggcaa agatagtgtg ctgtcaagat 300
ttattgcaat caacatgaat cagaatttaa taaaaatctc caatgtgctt cacttaaatc 360
atgagcacta gacaattttg ctcaaaaaaa aaccggccgc tctaaaggat ccaagcttac 420
tta 423

<210> 2347

<211> 451

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-062-Q1-E1-C5

<400> 2347

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cccgatatca cgaaacgacc acacactcct attggagatg aggtggaatg caagaagcca 120
aagatagcag aaggctcaag gtgccaaagga gaagaacctg aggctggagg gataaagaat 180
tcctcctggg tctgatgaca ggggaatgca gtaaacaacca gaagcatcaa aactatgatc 240
tggaacagta tcctgaataa actattttct ggattatgaa tgaattctga agcatggggc 300
tataagtgaa ttatgtaaca tggatttgta actatggtgg atgttaagtt aacgttctat 360
cagtgcacaaa naggaatta taaatgaaaa atgataaata attaaatgca ttaaaaaaaaa 420
aaaagcggcc gctctanagg atccaagctt a 451

<210> 2348

<211> 415

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-062-Q1-E1-C9

<400> 2348

cccgggtcga cggggaaaag cacagtgaca atctgtggtg atattcacgg acaattccat 60
 gattttgttg agcttttccg gattggcggg aagtgtccct gataactaatt atttgtttaa 120
 gggggaataa gttggttttg gataactaacc cggttagaac gtttccgcct tggtagcact 180
 gaaggttcgc caccacatc ggattacaat cctccgcgga aaccatgaga gtcggcagat 240
 cacacaagta tatggattct acgatgaatg cctacgaaag tacggcaatg caaatgtatg 300
 gaagatattc acagatcttt ttgattatct cccattaaca gccctggtgg aatctgaaat 360
 tttctgcttg catggtggtt tatctccatc gattgagaat cttgatagtg tgcgt 415

<210> 2349
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-062-Q1-E1-D10
 <400> 2349

cccgggtcga cgggatataa gaaacggtga aagggccgga ttctgaaaac gcagaaacag 60
 ggagagacaa atccaatctc ggaggggctc tcgcccctcc caaacaatgg aaaccatgga 120
 ccaaagggga aacccttctc ccatctaggg aaaagggtcaa ggaagaagaa taagaagggc 180
 gctctctctc cctcgcttca aatggcaccg gaacgccgcc gggggccatc atcatcactg 240
 caatctacac caacacctcc gccatcttca ccaacatctc catcaccttc cccctctatc 300
 tacagcggtc cactctcncg caaccgctg taccctctac ttgaacatgg tgctttatgc 360
 ttcatattat taaccaatga tgtgttccca tcctatgatg tctgagtaga ttttcgttgt 420
 cctatcggtg attggtgaat tactttgat 449

<210> 2350
 <211> 387
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-062-Q1-E1-D11
 <400> 2350

acggtctact atcccggtc gacgggaaaa tctagctagt cgatctgacg gacgctcagc 60

ggctactgcg gtcgaactca gcggacgaag tgcacgcgat gatggcggag atcgacatcg 120
 acggtgacgg catcagcaac gtcaccgaga tcattctcctt ctgcaacgcc aaagccgggc 180
 gcatgaaaga cgtcgccaag gtcgtctgaa tcagttcatg tcacctcagc cgtccgatcc 240
 atgagccgat ccatctacgc tcagcttcga atatcaattt catgcaacta cctactccgg 300
 tcacaattca gcctcagctt cacctgaggc cggccctaatt tttgttcgat catgttatat 360
 gccaccacta ttgcctagtg atgatca 387

<210> 2351
 <211> 480
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-062-Q1-E1-D5

<400> 2351
 ccgggtcgac gggatatctt cggaatagtt tatcgtttgc tctagtgcct cacttatatc 60
 ttttagagca cgggtggtggt tctattttat agaaataatt aatctctcat gcttcactta 120
 tatcattttg agagtctttt agaacagcat gataatttac tttggttata aattttaaaa 180
 gctaagagaa attggatgct tgatagttgt tttgagatat aaaggtggta atattagagg 240
 tgtgctagtt gagtaattgt gaaattgatg aatacttggt ttgaagttgg caagtcccg 300
 agcatgcacg tatggtaaac gttgtgtgac aaatttgaag catggggtgt tctttgagtg 360
 ctttccttat gagtggcggg cgggggagcg cgatgggtctt ttctaccaa tctacccct 420
 aggagcatgc gcgtagtgtg tggtttgatg actttagatg tttttcaata agtatgtgag 480

<210> 2352
 <211> 408
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-062-Q1-E1-D9

<400> 2352
 ccgggtcgac gggaagccag agcaagacgc gcagacaggg cacggcggcg cggagaacgt 60
 ggaggagtac ctgagcctgg agagccactc gaacaaggcg aggaggatgg agagcaccca 120
 gaggcgcaag ttcaagagga gcttcacgtt gccggcgagg atgagctcgt ccaactcgcc 180

gtccccgtcg gtgtcagcct cgacggggcc ggcgccgtcg cagcagcagc agcagcaagg 240
gatggagtagc cgagcgcagc acgagggcag cgtctactca gacctcatgg agacgttctt 300
ggagtagcaa cgcatgcatg cgtcgacggt cgatcgatca tccttacgac gacaagcgta 360
cggactctat gttttcttgt tcccactttt tgttttgttc caaccaag 408

<210> 2353
<211> 431
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-062-Q1-E1-E11
<400> 2353

cccggtcgac ccgtgaacac tagtgatcat gtcctatggaa acaatgtaga atttttcctg 60
aagattctca caaaaataat tatccccttg tacaattcca ttgtattata aaaataatgt 120
gccaagattt gcctttatga tgagtagatt tcttggtggg atgtgcgtgc aaaaacaaaa 180
actttggctg tagtgcgtaga ttttacattt ttttattgga acgtcgaaaag tttctgaaac 240
tttttgcaca gtcttgctat acaaattttt ttcttttgtc ctaatttttc agaatttttg 300
gagtaccaga agtatgggta atgttcagat tactacagac tgtcctgttt aagacagatt 360
ctgtttttga tgcattgttt tgcattgttt gatgaaacta tcgattctat cagtgggaata 420
agccatgaaa a 431

<210> 2354
<211> 356
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-062-Q1-E1-E12
<400> 2354

ccgggtcgac gggacaacga aggatggatc tgcgtcgccg aatccctgga acaacctggc 60
agggttatac ggatgaacag tgtctcattt tttattcaag catgctgcat gaccgatcga 120
cacogtgagc gcgtacctca gtgtttaaat gccctggtaa acggtgatat agtagtatag 180
tactccctcc atttcataat gtagtgcttc ctttatctcc gtacttcaaa tttgaccgta 240
aatttaacta tcaagatcga ttgtggcggg agcaaaaatt atatatatca gaatttttgg 300

aataccaaaa ataaggtttc tctttaaatt actaaaaaaaa gtcctgtcta agaaaa 356

<210> 2355
<211> 242
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-062-Q1-E1-E7

<400> 2355

cggtcgaccg ggattagtga gttataaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120
aaaaaaaaat aaaagaaaaa aaaataaaaa aaaaaaaggg gccgctcaaa aggttcaaat 180
ttaacttacc ctttaatgaa attttaaacc tcttcaatag ggccccctaa ttttaatttca 240
gg 242

<210> 2356
<211> 308
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-062-Q1-E1-E8

<400> 2356

cggggccgac gggcaaggaa gtttacatta atcaaaaaaa aaaaaaaaaa aaaaaaaaaa 60
aaggcggcgg cccaaaagg tcaaggctaa cttaccctg aaggcaacgt caaacccctc 120
caaaagggcc accaaatttc aattcacggg ccgtcgttta aaaacgtcgg gacggggaaa 180
acccgggggt aaccaaactt aaccgccttg cagaaaatcc ccctttcgca accgggcgta 240
ataccaaaaa ggccgcacg gttggccctt ccaaaaattt gccaccctg aatggcaaat 300
ggaacccc 308

<210> 2357
<211> 446
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-062-Q1-E1-H11

<400> 2357

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atggggttgt tgtcgtccgc cgtgaggaaa tgtaacagca agatgctcct cggcggcggc 120
tcttcatctc cgtgtggtgt gcgcggcaag gaacaaccat tgacgcccag caagcacaag 180
cggtcgagga agaagcgctt ctggaggaag aagaagtcca gcaagaagtt cggctgcgtc 240
ccctgcgtca gcctcaccga gctcaccagg cgcgccgagt gcgaggccat cgccgacctc 300
gtcaacaaca tctcggccaa gtcagacgtt accagccaca tgtacgcggc cgaggagatc 360
ctgcggatca ccaaccataa catccccagt agagtgtcga ccttcogtga gttgtccgcg 420
gcnacaaca acttcagctg cgataa 446

<210> 2358
<211> 426
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-063-Q1-E1-A10
<400> 2358

gtaccgaact agaattcgcg ggccgacggg cttaaaaatc ttgcagcaaa atatagatgt 60
gtttataact gcacatgagg aacaacaaga gcgggagaag aaggaaagag aggcagcagc 120
tgaagaagaa gaaggataga gtttttagatg ctgccgttga gagcgagggc gctgccggac 180
atgctatcgc ggaaggaagc aagaagattg tattggtgaa gcaaaagaag aaaattaagc 240
atgccaaagt aacaagctgt tgtaccaagg ctcataattt ggtgactctc aatgaggatg 300
aggcaacacc taagctgaag aagaagaaga gcaaaaaaca gctaaaggaa agcaaaagtc 360
ctgttgaggt acaaagtcca ttggacagta atgatgctgg aacacttaag ctgaagaaga 420
agaaaa 426

<210> 2359
<211> 359
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-063-Q1-E1-A4
<400> 2359

ggtccggaag tcacgggtcg acctcttctc ccccggaac cgatggctgc cgcgctctca 60

accccaagat tgcgcagttc gctaaccgga acccggactt gcggtcccgg aagttcacct 120
 aaaaaaacca cagttcaatg tgttaaacc tcaagggtcaa ggtcctccct ttctacaggt 180
 tctacagggga agccaaggga agggtcagca gcttaagctg cacaattgca cccatcacga 240
 atttcaagga cgcctctgca aagcactcgc cggacaggtg aagcctcggc ccggcgcggg 300
 ggctcaagga ggcggagctc tgtggtctgg cggcaaaaag ggacctggaa ttcacctac 359

<210> 2360
 <211> 312
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-A8

<400> 2360

accggtcagg tatatccggg tcgacgggaa ggaccccaaa gacctgcaga cggagatcga 60
 cgacggcgag gtcgagatcc cctccgctta aagacctgat gtcgaggtga ttatcatctc 120
 tgatgatatg gaagtcatac catgttgctt atgtaccttc caaacgatgt gatccctcct 180
 ctttttgtca tgttttagca gtaatcctgt gagacctcat tgttactact gcataatttg 240
 tctttgcaat gtagtctgtg cacttgggtt aacttaatct ataccattca gtgggttaaaa 300
 gttaagaaa ac 312

<210> 2361
 <211> 452
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-B10

<400> 2361

taccgtacta caattcgcg gtcgacgggt acatgattag aatttgctag aatactcttt 60
 gtgcttcaact tatatctttt gagcttgata gtttctgctc tagtgcttca cttatatctt 120
 ttagagcacg gtggtggctt atttttgtag aaattgctag tatctcatgc ttcacttata 180
 ttattttgag agtcttttag aacagcatgg tatttgctat ggttataaaa ttggctcctag 240
 aaaggtaggc atctaaattg ggtataataa aaactatcat aggaagtga ttggatgcta 300
 tgatcaattt gatacttgat aattgttttg agataggagg gtagtgatat taaagtcatg 360

ctagttaggt gattatgaat ttaaagaatg cttgtgttga agttagcaaa tcccgtagca 420
 tgcacgtatg gttaaagttg tgttaciaat tt 452

<210> 2362
 <211> 357
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-B2

<400> 2362

ggtccgaaa tcacgggtcg accggccccc tggtggcaac cgcgccctaag gtcctccggc 60
 atcgccgtcg tacccccaaa taaggcttaa ggccattaaa atcggttaact gggggaaata 120
 aaggtttgaa cccaaaacct aaattccaag gggtttgatt cggcaaaaaa aaaaaaaaaa 180
 acaaaaaaaaa aaaaaacggg cgccccaaaa gattcaaacc taactaacc tggaagccaa 240
 ctcaaaacc ctccaaaatg gcaacaaaa tcaaatcaat gggcgctcgt ttaaaacgtc 300
 ctgaacggga aaaacccggc ggtaaccaac ttaaaccccc tggaacaaaa tccccct 357

<210> 2363
 <211> 491
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-B6

<400> 2363

accggtcagg tatatccggg tcgacggggg gcatcgttta aactttgggt tttgtttaga 60
 ttgaaagttc gccatagctg caacttcgcg tacttcgttt gtgttcaacg accagacaaa 120
 ggcgtcacag aacccacact tgatcaataa agctttcatc ttatattcgc aatatccaga 180
 ttgcaatctt agtttcttgc ttgttcttcg tttgctcgca ggaaacagac cctcgtggtc 240
 aggttgattg tgctccggcg tggtaataa cctctcggag ttggtttagc gattgctaag 300
 gcgcgacgtc ctgcacgtt cgtagccgga tcgtcaaagt tgacttccac caaagcgata 360
 tccatcatct catccataga cgggaaatct gtgcctccat caagtggat cagattttca 420
 ggttgctcgg tgaaaattta cagtttttcg tagtttagat cgagtctgtt cttcatacct 480
 acagtccacg a 491

<210> 2364
 <211> 191
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-C1

<400> 2364

attgatccaa tcaaaaaaca cacttgaata ttaactacac ccaataactta agtacagtca 60
 tattgcctcc aagttggggc tttaaaagga aaaaatggaa acccaaaaaa aaaaaaaaaa 120
 aaaaaaaaaa aaagcggccg cccaaaagga tcaaagctaa cgtacgcgtg aatgcaacgt 180
 catagccctt c 191

<210> 2365
 <211> 461
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-C12

<400> 2365

gtaccgtact acaattcgcg ggtcgacggg tttagaggagg tcatgcacaa gctactgcag 60
 cttcgccaga ctgccacggt cgccgagtat cgcgcggcgt tcgacgagca aatgtaccat 120
 ctgcttgccg tggatccatc catcaacacc aagtttttcg tcacccagtt catcatgggc 180
 ttgaaggacg agctacgcgc cccggttcgg ctccaagcgc cctcgagcat caccgagca 240
 tcggtattgg cgcgcatcca agaggaggaa ctaggcacga tgcgcgcacg cccacgcac 300
 acgccagcgg gacggcctcc actggcgacg cctcctccac aaccacgggc agccgctgat 360
 acgtctaaat gtatctataa ttttttattg ttccatgcta tattaaattc tgttttggat 420
 gtttaatggg ctttattata cacttttata ttacttttgg g 461

<210> 2366
 <211> 266
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-C6

<400> 2366

gggccgacgg ggcctgcaa aggatgccaa gtcagcgttt aggatccac acaggaatt 60
tcttgacatg ctctaccgg atcttgact aatcacggc tcagtatgat cgtgtttag 120
atgaggacgg aaagatatgt gtgaccatct tattcatcac ctcaacagtg gatcatggac 180
gaccaatcag tagcaacggc tcgtgtcaac attcctcatg gtcaacatca cgcgcatggc 240
atgcaacgtt gtggatcgtc tgtaag 266

<210> 2367
<211> 436
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-063-Q1-E1-C8

<400> 2367

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cttaaagtgt ctagtcatat tcttcatgat gctctcttta tgttacaatt cttatccttt 120
atgtgagcat cattgaaatc atcatgccta gctaggggcy ttaaagata gcgcttggtg 180
ggaggcaacc caattttatt ttagctcctt gatttttgtt cctgtttaat aataaaaaat 240
ccatctagac tctgtttaga tgtgggttta tgtgtttaat tagtgtttgt gccagtaga 300
accgttgagg agacttgagg aaagtcttgt tgatcatgat gtaaaanaca naaaacttta 360
gcgctcacia gaattactgc catttttatt tggagagtgc tatttagtta attctttctg 420
aagatgatta atagat 436

<210> 2368
<211> 445
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-D12

<400> 2368

attccccggc cgacgggact aacaatttat cagttaaate tttggtcaaa atttaccaca 60
aattacaata gtgaggaata aactaggacg gaggtactcc ctccattttt gtatacaagg 120
caactataaa aaatacattt tgcactata caaggccacc aacagtaatc gagacaaata 180

ttaatgatgt ttctctgtac tagtaaccca tggcttaatt actagcatgc atgtagtgga 240
 tgatagtgac aaactcatct acttctctct tcaogccac tcaatttctt ctaatgtgca 300
 tgcaccctat taattaaccc agtaaacgag aaaataaatt gatttgtaaa gcacacattg 360
 atttttatct tggtagctgc aatttttagtt tgtggctgtg tatataaaaa tgaagggagt 420
 actagtagta gtttagaaac ccaaa 445

<210> 2369
 <211> 454
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-D9

<400> 2369

gtaccgatct agaattcgcg ggccgacggg tgcacaaaaa ggcatcacct ttttcatatt 60
 tgtctatcag taactttact taaggctata tttttattca ccacatgata tgtgttttgc 120
 ttggatcatc ttgtatgatt tgagtctttg ctttttagtt taccacaatc atccttgatg 180
 tacacacctt ttgggagaga ctgcgatgat tcatgatttg ttagaatact ctatgtgctt 240
 cacttatatc ttttgagcta gacaatattg ctctattgct tcacttatat ctttttagag 300
 cacggcggtg gtttatttta tagaaattgt tgaactctca tccttcattt atattgtttt 360
 gagagtattt taggatagca tggtaatttg cttatgttat aaaattagtc ctaatatgat 420
 gggcatccaa gatgggtata ataaaaactt tcatt 454

<210> 2370
 <211> 451
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-E10

<400> 2370

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 tggggtggtg gacggacgag gctggccaca gtgcggcggt tgtcatgccg ccgacggtgt 120
 ctgaatgggg aatggacgg gagggggatc tcaaactttg ggatgcgctt ctctgaaatg 180
 ggggaaagtt actaacttat ccccatctta aaatttcgga catagcatcg gttggggata 240

cgacagtaat ctcgcatctc ccaaataattt gccggttaact atttcgagcc agtggttgctg 300
 ttctcgcgcg gctcgggtgg cagccatgga tgaggtgact gatgcggtga acaaccttac 360
 cataggggaa tgagcagcgg cgacggcggg agcggatggg cacaagaaga accgcatcca 420
 ggtctccaac accaagaatc cgctcttctt c 451

<210> 2371
 <211> 447
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-063-Q1-E1-E12

<400> 2371

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 ccggcggcga ggggaagacg aggggcagga agaagggcag caaggccaag aagagcgtgg 120
 agacgtacaa gatctacatc ttcaaggtgc tgaagcaggt gcaccagac gtgggcatct 180
 cctccaaggc catgtccatc atgaactcct tcatcaacga catcttcgag aagctcgccg 240
 gggagtcggc caagctcgcc cgctacaaca agaagcccac catcacgtcc cgggagatcc 300
 agacctctgt ggcctcgtc ctccccgggg agctcgccaa gcacgccgtc tccgagggca 360
 ccaaggccgt cnacaagttc acctctcct agacaactta ggcttgatcc tcgtcgcttc 420
 atgcgttctg tatgtacgta gttggca 447

<210> 2372
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-F11

<400> 2372

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 tgttcgtcgt cgtttccgac gacaaccaga gtctcagggg ctactatcta catagggcac 180
 acctagcatg tgcaggacta tcatacatta ttttacgtac ctcaaagcct gtcagtagac 240
 tcataaaagc ttcatgcaat ccgctttcgg cggacgagat tctctccatc accgtattca 300

tcagcacacg gtgttcacat gagatggcgc ctcgccccac caactccctc agaacatctg 360
atcgcacacc aaatggtgtc agactctttt gtccgctctc ttcggcagcc ggacactggg 420
agcttcgggg gtca 434

<210> 2373
<211> 432
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-063-Q1-E1-F9
<400> 2373

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agccgcttgg ccgtgctgaa gacgaatagc attccagtga ctttgagcca gaagaaaatg 120
gtgatggtgc tgaggacgag gagattgagg atgatgatgc tgaggatggt gaggattctg 180
tcaaggcgca atcctcttcg aagaggaaga ggtctggcgc ggaggatgaa gatgatgatg 240
acggtgatga tgatggtgat gatgatgaga agcctccatc aaagcgatag tcaatttggt 300
cttgctgac tggtatcttt tctgcttggg ccaagaagga aaataatcct cacggagagg 360
gttggttgta aatgctgtag ctttaggaca tctgtggtag gtgtagcagc tcgaacttga 420
gtctacccat gt 432

<210> 2374
<211> 446
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-063-Q1-E1-G10
<400> 2374

attcccgggt cgacgggaag caggagatca tgaacaaaaa gccgctttct accagcaaca 60
ccgaaaatca agatgttgat gcaaagcagg ggctgcagga actcaaggtc catggagaga 120
aaaaccctgt ggtggaaaac ggtgtggcgg caggggctgt aaatggtggt gcccacacag 180
acgcaagccc ggcagcggtc gcagttggct gttgatttcc gctgctcaag tcatttgatc 240
atccattcga ggaggacagc ttatatacag ggtgaggaag agttgccgtg gctgtaggaa 300
ttcaagattc tgctagttgg atatatgctt gtgggttgca gaaagggtgca agtctgaggc 360

gattcaggat tcaatgaaag gctttttttt tggggtggtt ctgctcttct gtagtatctt 420
cgccgttgct ggagtctggt ggttgg 446

<210> 2375
<211> 438
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-H11

<400> 2375

attccccgggt cgacggggaa gaaaccaagg cggagaagcg ggcgccggcg tccaaggagg 60
ccggcggcga ggggaagacg aggggcagga agaaggcag caaggccaag aagagcgtgg 120
agacgtacaa gatctacatc ttcaaggtgc tgaagcaggt gcacccagac gtgggcatct 180
cctccaaggc catgtccatc atgaactcct tcatcaacga catcttcgag aagctcgccg 240
gggagtcggc caagctcgcc cgctacaaca agaagcccac catcacgtcc cgggagatcc 300
agacctctgt ggcctcgtc ctccccggg agctcgccaa gcacgccgtc tccgagggca 360
ccaaggccgt caccaagttc acctctcct agacaactta ggcttgatcc tcgtcgcttc 420
atgccttctg taagtacg 438

<210> 2376
<211> 450
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-063-Q1-E1-H9

<400> 2376

gtaccggact aaaattcgcg ggtcgacggg ccctctaattg gaaacggttc ccgccgccgg 60
tacccttttc gggtcgggag gaacgcagcg gggcagcaga gataagctgg taatgctgcg 120
cactaagttg acccccctat ggggttgacg ggcattacgg atacttgggg cctgtttgga 180
gtcccccccg ctctgtgact ctgctcccgg agtagccgta gccgcagttc aatatcatgg 240
agcgaggaaa caggactcc gcggatcctt gggtttggtg gagctagtgg tttcccgaac 300
agctccttag tgatatacca catagctcta gatacatcga ggaaatggtc gatcgctgtc 360
tttgcggaat cggccacata ggcacgtgac atttctgatg agagtatctg ggggtgtgatc 420

cattgactga ttgttactgt acttggtaaa

450

<210> 2377

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-A10

<400> 2377

cgggtccaca gggcgtcaca caatatcaat caacaataat tcttgccgaa tgaaaagttc 60
cagtagttca ctctataatc ctagtattgg ttacatgcac acacatctca gtgtaatcca 120
acaatatcta cacaggggtct tgttttttgtg ctagtgacaa gttgagttag ttgcaatggc 180
ctagctgcta aacaagcaga cctgagttcg acgatgtacc gatcaatcct ttgatccgga 240
gaatagtttt tttagtgggt gatcccgatc acgagaaaag tgaatcgaga aaactgatcg 300
caattgatga tgagaaaatc gaaaaccggt agggcctaaa aaccaaggat tgacatacaa 360
gaaaggaaaa tgcttgtggc tggcaggcca gccgaacttt aagctgggtca tgcacgaggt 420

<210> 2378

<211> 442

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-001-Q1-E1-A11

<400> 2378

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cgcagttcgc tgagcgggaat ccggacgtgc tgttcctgca agtcaactac gagaagcaca 120
agtccatgtg ctacagcctc catgtccatg tcctcccttt cttcaggttc tacaggggag 180
cccagggcag ggtcagcagc ttcagctgca caaatgcaac catcaagaag ttcaaggacg 240
ccctcgcaaa gactcgccg gacaggtgca gcctcggccc ggcgcggggg ctcgaggagg 300
cggagctctt ggctctggcg gcaaacaggg acctggaatt cacctacaac gagaagccga 360
cgctggtgcc gatcgccgag gctatccana tggaagctgc ctccattggc ggcccatgga 420
tgccattgcg cgcggccgct ct 442

<210> 2379
 <211> 458
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-001-Q1-E1-A3

 <400> 2379

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 catctggatt ctgtatacgt ggaaggagaa gagacaacat gtttgatgag agagcaggaa 120
 gaacatggac gagaggggaa ggatctcgtg gggtgagggg ttgacaattt tgtgcggggg 180
 agagagggat tggtaat ttt gtgcaagaga gagagggcgg ggggaggagt cagtcagccg 240
 tcgtcacatc accctgcttc caaatgaccc cgcagttctc tagcgcggtg tggtcaccgt 300
 cttcgatctg ctcgttccct ttttgaagat tgaggtgttg tgcattgttg ggtgcagaga 360
 agcacaagcg agagtggctg ccgtataacc ttggatgggg atgaattgtg tgctcggggg 420
 agtgtgtgtg tgtgttgtgc cgcctgtgtg tgtgtgtg 458

<210> 2380
 <211> 352
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-001-Q1-E1-A6

 <400> 2380

attcccggga tcacgggatg gaggcaatta tttgagatgg ttttaaattc gtgagggcct 60
 ttttagcaaaa ttacaaatga actgagtctg cgacatgttt tttgggacgg agggagtatt 120
 tcggtacgga tggagtagat ggtatgctag ctcaaaaaag aaaaagagta gatggtagtc 180
 aaacagccaa actaagtga accaggctcg ctgggaaagg ctaccaaaca cggccctagg 240
 ggccacgtgc agccactcaa tccacttgct tgttttact cttgtgtttt ggtgggcact 300
 cgtgcggacg aagcatggaa actcccgaca tgacctgggc tcgcaaccaa ca 352

<210> 2381
 <211> 439
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-A7

<400> 2381

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agtttttagac caaaggaagg atgaatcaat tgaacgcaca tttaaaggag ttgcaaggca 120
cttccgcgaa gtgttctctg aattagtgc aggtggtcac ggatacctgg ttatgatgaa 180
gaaaaaggat ggtgatgctg ccgatgatga catggatgag gacgcgcctc gtgaagcaga 240
tcctgaaggg aggatagaga actatattgg tgtgaaagtc aaggtttcct tcactggcaa 300
gggagaaact cagtccatga agcacttgtc tggagggcag aagacagtgg tggcattaac 360
actgatcttc gctatccaac gatgtgaccc aactccgttc tacctgtttg atgacattga 420
tcctgctctg gatcctcag 439

<210> 2382

<211> 333

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-A9

<400> 2382

tgcaggggttc atcgatccag ctccgcacgc cgccgtccga ccgagagtag tagtgctatc 60
tatctagttg ctgtctaggg ttcgtggttc tccgtgcaag agcagtggta tctccttggt 120
gtttgctccc gtcttgtagag ctgatgttgc tgttgtagag atgtactgga agaagtttgg 180
aatggaaatt gcagcagttt atccctgaaa aaaaaaatc gagaaattaa aacacatcaa 240
taagggataa aaaataagaa acagatacct gagtcaagat gcagggggat atcagaagac 300
gggacacaaa aaaaaaaagg gggccctcaa ggg 333

<210> 2383

<211> 403

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-B11

<400> 2383

cggttcgata gggagtatga agcccaggac aaggagctgg tgcaacttaa gcgtgaggcc 60

cggatgaagg gtgggttcta tgtcagtcct gaggcaaagc tgctgtttgt cgtccgtatc 120
 cgtggtatca atgcaatgca cccaaagacc aagaagatct tgcagctttt gcgtttgagg 180
 cagattttta atggtgtgtt ccttaaggtc aacaatgcca ccattaacat gctgcgtcgg 240
 gttgagccat atgttgcta cgggtaccct aacctcaaga gtgtcaggga gctgatctac 300
 aagagagggtt acggaaagct caacaagcaa aagatccctc tggccaacaa caaagtcac 360
 gaggagggtt tggggaagca caacatcatc tgcattgaag acc 403

<210> 2384
 <211> 387
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-B4

<400> 2384

cgggtccacg gaaagaagcc caacgcggag aagcggctgc cggcggggaa gtccgccgcc 60
 aaggagggcg gcgacaagaa gggcaagaag aacgccaaga atagcgtgga gacgtacaag 120
 atctacatct tcaaggtgct gaagcaggtt caccgacaca tcggcatctc ctccaaggcc 180
 atgtccatca tgaactcctt catcaacgac atcctcgaga agctcgccgg cgaggccgcc 240
 aagctggcgc ggtacaacaa gaagcccacc atcacgtccc gggagatcca gacctccgtc 300
 cgctcgctcc tccccggcga gctcgccaag cacgccgtct ccgagggcac caaggccgtc 360
 accaagtgca cctccccgta gagtgtc 387

<210> 2385
 <211> 471
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-B9

<400> 2385

cgctcgccgg taccgttcct atgctcgccg gtcgacagga ggaggccacc ctactcacc 60
 cagtcaaacy gggttgccga gcgaaaaaac cgtactctaa ctgatttggt taactccatg 120
 ttagatacgt cgggtttatc caaggcatgg tgggggaagg ctataatgac atccgggtcat 180
 gtctgaata aagttccaac aaaggataac gagatcactc cttatgagaa gtggacgaag 240

agaaggacaa cactctcgta cttacgtacc tggggatgct tggcgaaagt taatgtgctg 300
atccccaaaa agcgtaagct tggaccaaag actgtggact gtgttaattt gggctatgct 360
atgaatagtg ctggctatag atttctagta gtgaaatctg aggtacctga catgaagttc 420
ggtacaatta tggagtctaa agatgctaca ttctttgagg acattttccc c 471

<210> 2386
<211> 458
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E1-C11
<400> 2386

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aaaagcacat ccagatgtct tcaacatgat gttcagatc ttagaagatg ggaggctgac 120
agatagcaag ggacggacag ttgacttcaa gaacactctg ctgatcatga catcgaatgt 180
cggaagcagt gtcacgaga agggaggccg gaagattggg tttgaccttg actctgacga 240
gaaagatacc agctataaca ggatcaagag cttggtgacc gaggagtga agcagtattt 300
ccggccagag ttcttgaaca gattggatga gatgatttg ttcgggcagc tgacaaagct 360
ggaggtgaaa gaaatcgctg atattatgct caaggaggtg tttgacaggc tcaaggcaaa 420
ggaaatcgac ctccaggtaa cagagaagtt ccgggata 458

<210> 2387
<211> 349
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E1-C12
<400> 2387

ccgggtccat agggagcaga aacaaatgac aagcggattt cagtaaggta ttctctgcaa 60
gcactgaaat tatcggtaac atatagtttt gtgataaagt aattcgtaac gggtaacaag 120
taacaaaagt aaacaacgtg cagcaagggtg gcccaatctt tttttagca aaggacaagc 180
ctggacaaac tcctatataa aggaaagcgc tccccaggac acatgggaat tatcgtcaag 240
ctagttttca tcatgctcat atgattcgtg ttcgttacct tgataatttg atatgtaggt 300

ggaccggtgc ttgggtaatg cccttccttg gacaaacatc ccaattatg

349

<210> 2388

<211> 384

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-C2

<400> 2388

gggtccacgg aaagtcgtcg aactgacgcc ggatcacagc gtcggcgtgc tacatcacia 60
cagcaagagc accaagtcgt cgaagttgca tcgtagcacc aggtggctcc ctgcagcgat 120
gtcggctcgt agcatccggc gtgatgcac acaacagcag gagcaacaag tcatcgaagt 180
tgcacgtaa caccaggtgg ctccctgcag caacgcgcct cgaactccct aatctgccgt 240
gttgacgcaa ccacatgaa cggccgcggg caacggcaag caagccttcg tgctgtgttg 300
caacaatgaa gggttgttgc tccacctatg gcctccctct tcttgctcgg ttgcaactgt 360
gacgtttaac cggggtcttc tcgg 384

<210> 2389

<211> 409

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-C4

<400> 2389

cccgggtgca cggagaccga agcagccaaa gaaactcgaa acacaggaac aggaagcaag 60
ctgccccccc ccctcctcat ctccgactca ctcacgatcc gagatcagga tggccggatc 120
gatggaactc cctaccaagg gcggcttcag cttcgacctg tgccgcagga acgccatgct 180
ggagaagaat ggctcaaga tgcccgggtt caggaagacc gggactacca tcgtcggcct 240
cgtgttttgc gatggagtgt ttcttggcgc acacacaagg gcaaccgacg gtcctatagt 300
tgctgataag aactgcgaga aaattcattt tatggcagca aacctatatt gctgtggtgc 360
tggaactgct gctgacacag acgctgtgac acacatggtc agtcccag 409

<210> 2390

<211> 434

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E1-D10
 <400> 2390
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 gggctgcatt tgcacccatc atggagtgat gtctgcatga aattttattg ccaccaagg 120
 ctcgtctctt tttatctaca tggtcattac cattgtgtac aataactaca tgcataggaa 180
 tagaacatag tgagattatg taaggagtgc atgccgaaat ctagagtgat ggtagcaacc 240
 tgtggacaga cccaaaacca atgatagcag gcagataata gccgccatta aaaatacaga 300
 taatggctcc tttactgttt gtttcccacc caacatgata gtcatagtat acacctagag 360
 attaaactagg tagtaaacad ataatttgg ttgttgogcc gatattctacc ccacaaccaa 420
 ttaaaaactt aact 434

<210> 2391
 <211> 377
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E1-D11
 <400> 2391
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 ttcatcacat cttgtacctg ttcagtcac c atgtgctgaa acttaacatg aagctccttg 180
 ttcgataagt tctcccagtc aagctcgtcg gcttgtgac c tggcatggg tagcagcaag 240
 agggcgacac cagaatatga tcgtacaggc ctactaagaa gtgggttggtg gtgtttcaca 300
 aatctgttca agcaagtctc ggattcttac gagttcgtac ccaacagcag gcggtgagtc 360
 ggaagcggtg tagtcag 377

<210> 2392
 <211> 212
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E1-D12

<400> 2392

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cattttgatg tgcccagtgt tgctcgcaaa cataggatag atgagtgggc aagctcattc 120
taggtttcta ctgcattgtt tcttgataaa atttgctttt gcgttaatgt cgttgacagc 180
attgtagtaa acaccccttt ggttattgtc gc 212

<210> 2393

<211> 463

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-D2

<400> 2393

gggtccacgt agaagaagaa gacgaagaag aggaagaaga agaggaagaa gacggaagag 60
aaagaagctg agacgactgg gcagaagcag acatttgaca ctactgttga aaattcaggg 120
gcagagccta cagagagaga cacggttgac ggaaaacagt ctagcaagtc aaagaagagc 180
aaacgtaagc ataatgatgg tgcacctgcc gtacaggttt ctgctggcga tcaaactcgtg 240
acaaggggaag ataagaagag aaggaaggaa ccacttgtgc tggaagcgag caagcaaacc 300
caaaacacag ctgaagggtga gaatagagag attcagaaga gaggacagga aagcagtaaa 360
accagtccag acttttagtga gaatgcatct gcgggggggag aagaagctgg tttaggtgtt 420
aactaatgag tagaaggacg aaataagaac cagggggaat tga 463

<210> 2394

<211> 277

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-D9

<400> 2394

gggtcgacag gcagccatta cagttgcata gcagtatata agtcaatcac atccccataa 60
aatttgaggg ttgccagga gtaacggtat caccctcaga ctttacaggt gcactagtag 120
tatcgcaact ggggtgcaacc tcgaggattc tagctgcgac aaacgtttca catcaattga 180
catagtcacc acgtgtgcta gttgcacaag actatgtatc tagttagcat ccttaggaaa 240

tccatatgcc cacagagcat aatagagatt tggcagc

277

<210> 2395
<211> 265
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-E2

<400> 2395

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ctctctccca cagcctcgc tccctctccc ctctgtccgc gccgcccgcg ccaccatggg 120
caggggcaag ttcaagggca agccaaccgg ccgccgcaac ttctccacc cggaggagat 180
cgcttctgga acttcagggc gtccacgctc atttaagaag aatgtagctg aagcagaaga 240
ggaagaggaa gaggtagaag aatct 265

<210> 2396
<211> 435
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-E9

<400> 2396

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tcaacctcaa ggtcaagggg caggatggca atgaggtttt cttccgcac aagagatcca 120
cacagctgaa gaagctgatg aacgcttact gcgaccgtca gtctgtggat cgcaactcca 180
ttgctttcct ttttgatggt cgtaggctcc gtggtgagca gacccctgat gagctcgaga 240
tggaggaagg cgacgagatc gacgccatgc ttcaccagac cggaggggtgc tttcctggcc 300
cttagaagga gcttgctgca gcctgtctgt tctatgtcgt atgctacctt tagaactaga 360
gtaaaatgta agaagtgaaa gaacttgtga gacgatgggt ctgtgccaat agcctgaggg 420
ggggtctgga ggtga 435

<210> 2397
<211> 451
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-001-Q1-E1-F1

<400> 2397

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gtanggatag ttgttagcgcg ttgccaataa cgcgctatag ataattctgaa tagcagtagc 120
gctttgcata taaaccgcta ctgctaagtg taactataca aaaatatgtc aatgcaaaaa 180
tacattggcc atcaatgata tttttgtgta caattctaat tgtcaatatg agtcctcttc 240
ggtaggaacc ggagaggact catattgcag ccacaaattt tacacataga gttcagttaa 300
gaccaactgg ttgtgatagt ttccagaaata acatatttaa ggtggtaaac accctgttca 360
cggagcgcgagg tgggactaaa cttgtgggct gatcttagca gtagcagttt tctactaagc 420
gcgctgctgc taacttccat agcagtagcg c 451

<210> 2398
<211> 351
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-F10

<400> 2398

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gcagggttga ccgtggccat catgatgttt ccaagggaga gcgaggcatc cgccatcgcg 120
tagctaaaga agtcgatgcc ccgggagagg ttggccaccg ttgccggtgt gaaagggcca 180
gatgagttca cttgtgtgtt ttacagtctt cagaattgga ggggtgagatg ctacagcagt 240
acagctgcaa attcccttgc ttatccgtga ggcgatattt caaaagtttg actgtgaccg 300
aatttattca tagagaagct aagcgggtact tgcagtatg cttgactaac a 351

<210> 2399
<211> 447
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-F11

<400> 2399

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ctactcattg atcttcactt atatcttttg gagtagtttg tcatttgctc tagtgcttca 120
cttatatctt tttagagcac gacggtggtt ttattttgaa gaaatagatg aactctcatg 180
cttcattata ttattttgag agtctttaa acatggttaa tttgcttggg ttataaaatt 240
tagtccta atgataggca tccaagatgg gtataataaa aactttcata taaagtgc 300
tgaatactat gagaagtttg attccttatg attgttttga gatatgaaga tggatgatt 360
aaagtcatgc tagttgagta gttgtgaatt tgagagatac ttgtgttaaa gtttgtgatt 420
cccgtagcat gcacgtatgg gtgaacg 447

<210> 2400
<211> 399
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E1-F2
<400> 2400

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gcagggttga ccgtggccat catgatgttt ccaagggaga gcgaggcatc cgccatcgcg 120
tagctaaaga agtcgatgcc ccgggagagg ttggccaccg ttgccggtgt gaaagggcca 180
gatgagttca cttgtgtgtt ttacagtctt cagaattgga gggatgagatg ctacagcagt 240
acagctgcaa gttcccttgc ttatccgtga ggctatatat cagaggtttg actgtgaccg 300
aatttattca caaagaagct atgcggtacg tgtcagtatg cttgactaac aaatagcatt 360
aggatctggg tttgttctct agaccttatt acttcatgg 399

<210> 2401
<211> 389
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E1-F4
<400> 2401

ccgggtcgac gtacgtcaag gccacgatct accgcctcat cgcccgcgag aagcccgtcc 60
acgccgtcct cgccggcggc aagcctgctg atcttgttct atggaggaac atgaagatct 120

caggaggggt gcttgctggc gctacggcca tctggctgct gttcgagatc atggagtacc 180
aactgcacac cttggtgggc cactgcctca tctctccct ggcaaccctc ttcctctatt 240
ccaatgtctg cattttcctc cacaagtctc ccccgaaat ccttgagggtg aaaattccag 300
aggacatgac tgtaaacatt gcactatcac tgcggcatga gatctagcgg ggcttcttca 360
ccttgagaca gatttgtcat ggctgtgat 389

<210> 2402
<211> 420
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E1-F9
<400> 2402

acgcctgccc gtaccgttcc tagactcccg ggtccacagg cataaataac atgaccgcta 60
tggtgatttc gtttcagcta catgcatgaa catgttccac gtcaagccac tcgaatcatt 120
caaaggagga taccacccta tcataccaca tcacaaccat ttactagca tggtggcact 180
caacgtaaac cattagaagc tcctagccta ttaagcatgg cataatcaac tatcatctct 240
aactatcatt gcaaacatgt tcattcagaa taagctgaat caagaacgat gaaccaatca 300
tatttacatc aacaagatac gtcgagttca tactagcttc tcccatctca atcatttcat 360
catataacgt cattactgcc ttccacttgt acgacctaat ggtgtctata ataataatag 420

<210> 2403
<211> 341
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E1-G1
<400> 2403

accaaagtgc acaaaatcca gcgtataatc aatcacagat caattccacg ccaagcaact 60
ctcagatccc tcgtggatca ccaaacaaat atttttggcg caaccataac gctgcctttt 120
ctgtaaattg ttcaactctg aacaaactcc cgtagaaaag ttgaaacctg ccatttatat 180
aggcgacacc cacgctgacc agatacgtct cctaattgga ctcgtacaga tccaaacaga 240
ccagacaaaa tctagcaacc gacctatact ccttttccga tttaaaagct cacgtacaga 300

ctccaaagac tacgtactag gactccccac tttcaaggaa a 341

<210> 2404
<211> 438
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-001-Q1-E1-G10

<400> 2404

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ccggagcgac ctcaaccggc cgcgtgcagc ggcagatgct gccccgcact tccccctgaa 120
aggacctggc tgggaggtcg tgggtggctgc cgggggcggt atgctctcag cgctcaccag 180
ctgagccccg ggcccgcctc agtgaccggc ctgtcaacgg cgaccgacgc cttggtattc 240
tgggtgcttcg gctttgttcg tcgcctgtgt taaggccgat gtttttgtga acatgatgtg 300
gacatgacaa cgggataccta cccccctaa gtaattatgg acgaccgagg cgttgcagtg 360
tgtactgtac tgcacccct agattaggaa ctgatcgatt ctttggcgag ctgtgttgtg 420
atgtaactcg agctcgtg 438

<210> 2405
<211> 227
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-G2

<400> 2405

gggtccacgt gtcattctcg acctcgtctt cttcttaatc atcatcatct ccgccgtata 60
cactctctgg gacaacctca tcttcttcaa cttgctatac tactccatgt gcgtcatcta 120
caccttctgc gcctgatata tcgtgtccga ctgcttcacc tacatctttt agaccatcgt 180
ggtgggccac ttctgcataa actgctactt actcacgctt cacttat 227

<210> 2406
<211> 130
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-G9

<400> 2406

gggtccacag gtgcaccata aatatgccca tggaagtcgt caatttgatt gatcactgga 60
agagccccga tgagttcacc aatgacttgt tcaaaagctg cgtcgcccaag aaccacatca 120
ctaggggcat 130

<210> 2407

<211> 317

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-H1

<400> 2407

acgcctgccc gtaccggttc gagagcccggt gccacgagt tggttgagac acacaatgct 60
agttgcacgt cacgtaaata ttttgagtac gggttgatac aatgcttcat gtgcgtcact 120
tatgtcattt gacgtttgga ttgcctgttt ctcttcactg tatcaaccgc catgtgtagt 180
aatactcttt tacgtcactg aaacttgtga tatagtgggc acatcatttg tagattgaca 240
taaactcaca tgcattgacat gtatcgattt agacagatga caggaagcgg tcaactcacat 300
ggctagtcat aagatcc 317

<210> 2408

<211> 340

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-H10

<400> 2408

gggtcgacag gttatattaa tctttgattt ttagtttacc acaatcatcc ctgctgtaca 60
caccttttgg gagaagccca cttgattata atttgctaga atactctatg tgcttcactt 120
atatcttttg agcttgatag attttgctct agtgcttaac ttatatcttt tagagcatgg 180
cgggtggctca tttttgtaga aattgctagt cactcatgct tcacttatat tattttgaga 240
gtctttttaga acaacatggg atttgctatg gttataaaat tggtcctaga atgggtacgca 300
tccaagttgg gtataataaa aactatcata ggaagtgaat 340

<210> 2409
 <211> 433
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-H11

<400> 2409

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gggtcgacag gtgccctttc acaccttgag agttgggtgca aacttcgccg gtgcatccaa   60
accccgatgat atgatacgct ctatcacaca taaacctcct tatatcttcc tcaaaacaga  120
caccatacct accaattatg gcatttccac agccattccg agatatattg ccatgcaact  180
ttccaccgtt ccgctcatca tcatcatgac atactttact tttgtcatat tgccattgca  240
tgatcatgta gttgacatcg tatttgtggc aaagccacca tgcattattt ttcatacatg  300
tcactcttga ttcattgcac catcccggta caacgcogga ggcatcata tagagtcata  360
ccttgttcta gtttcgacct ggaatccttg tgctgtaatc aatagaaatt tgatgatcat  420
cattattaga aca                                     433
  
```

<210> 2410
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-001-Q1-E1-H12

<400> 2410

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cctgccccgta ccgtgtctta tactctcggg tccacgggtc aagcataagt cgtatagaag   60
atacgatcaa catgaagatg ttcacgatg ttgactagtc cgtctcacgt gatgatcaga  120
cacggcctag ttgactcgga tcatgtttca cttagatgac tggaggggatg cctatctaag  180
tgaggagtcca ttatataatt tgattagatg aacttaatta tcatgaactt agtctaaaat  240
ctttacaata tgtctttagat atcaaattggc caacgttgct ctcaacttca acgcgttcct  300
agagaaaacc aagctgaaag acgatggcag caattatacg tactgggtcc gaaactcgag  360
gatcatcctc atagctgcaa agaaagatta tgtcctaaaa gcatcactan gtgacacacc  420
tatcccacag gaccaagg                                     438
  
```

<210> 2411

<211> 275
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-H2

<400> 2411

ctctgtgtgc ttatgatgga gtcccgcat tgccttgaga actgtaagcg tgtttaacct 60
 gacagcgct gtaattgtag gccctttccg catacgtcac agcttggtgt cttatgaggt 120
 gctgcatggc agcaggctgg tttatgccgc ctccggtcatt attaccactt gtaacttggt 180
 agagtgcaca ttaatctcag gaggacatac acataatact tatgctgctg ttgttgtagac 240
 gacctttatg cctctgcctt gtgttgcat tcata 275

<210> 2412
 <211> 201
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E1-H9

<400> 2412

cgggtcgaca ggacagcca aactgcgtct gatatatatt gcaaagtgtc cccttggaat 60
 tgacttccat atgttcttaa gtcacatata acaccatcga ctctgcctat caactattcc 120
 ccgaagatca ggtgtatcgg tactttgatt ctagggaag tacaccttg caactagtac 180
 aagacttata tcagaggatt g 201

<210> 2413
 <211> 162
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A12

<400> 2413

cgcgtcctgc agaccaagat tgtccagttc gctgagcggc aaccggacgt gcggttccag 60
 caagtcacct atcagaggca caggtccatg tgcaagagcc gccatgtcca tgctctcacg 120
 ttcgtcaggt tctacatgcg gagggcaacg cacggtcagc ag 162

<210> 2414

<211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A2

<400> 2414

```

cccgggtcga caagactaga gtatatgcgc atccattcat ccatccatcc cactgcccgt   60
ttcccccaact atataaaccc cctcccatcc ccaccactgc tcacctctct cctctcctct  120
cctctcctct cctccggcgt ctctctcccc ccacccctct tcctgatcaa agcgcacgcc  180
gagcaagcta gctagcaggt ggtggtgggc gcatacacat acgcttactg tacgcgacgc  240
ggctttgctt gtggccacca ccatgatgtc gtcgcccgcg gagtccgaga ccagcttctt  300
cccggaccac ctgcgggagc agcagcagca gcagcccccc ttgcgcgagc aggagcagct  360
gtgctacgtc cactgcaact tctgcgacac catcctcgcg gtgggcgtgc cgtgcagcag  420
cct                                                                 423
  
```

<210> 2415
 <211> 455
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A3

<400> 2415

```

tcccgggtcg aagggtacgt atgtgagaaa gatggatata tgtaatatac atgagatgcg   60
tgtgcatctg gattctgtat acgtggaagg agaagagaca acatgtttga tgagagagca  120
ggaaaaacat ggacgagagg ggaaggatct cgtgggttga gggattgaca attttgtgcg  180
ggggagagag ggattggtaa ttttgtgcaa gagagagagg ggggggggag gagtcagtca  240
gccgtcgtca catcacctcg ctcccaaagt accccgcatt ctctagcgcg gtgtggtcac  300
cgtcttcgat ctgctcgttc cttttttgaa gattgaggtg ttgtgcatgt tggggtgcaa  360
agaagcacia gcgagagtgg tcgccgtata accttgatg gggatgaatt gtgtgctcgg  420
gggagtgtgt gtgtgtgttg tgcgccgtgt gtgtg                                     455
  
```

<210> 2416
 <211> 360
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-A9

<400> 2416

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tcgagggttc atcgatccag ctgcgcacgc cgccgtccga ccgagagtag tagtgctatc   60
tatctagttg ctgtctaggg ttcgtggttc tccgtgcaag agcagtggta tctccttggt  120
gtttgctccc gtcttgtgag ctgatgttgc tgttgtagag atgtactgga agaagtttgg  180
aatggaaatt gcagcagttt atccctgaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaggga aaaaagaaaa  300
aaaaaaaaaa aaaaaagcgg gggcgtcaa ggatttcaac ttttttatcc gtgtaagggg  360
```

<210> 2417

<211> 376

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B1

<400> 2417

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cgcctgcagt acgtgtcgta ggctccgggt cgaagggtga ccaatgctaa tacgcggact   60
taaataaaaa cggaggggagt acacatttgt tttottagtt tgtagtgaac taatcatttg  120
ttgaaattgt gaaataaata tattaggcta ttgacttcga atgtaatggt ctatacaatt  180
caatagttac aatcattgtc gaatcccaag atgtatacaa ggtctatagt acttcataac  240
atgctcaaac tcacacacac acacacacac gcacacacat aaagtaaact agaagaccat  300
tctctcatgt atacacaacg tatcggcac tgtgtatgtc tcaactcatgc atgatcattt  360
gcacattcaa acctct                                     376
```

<210> 2418

<211> 464

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-B4

<400> 2418

```
tgtacgccgg caggtaccgt gtcgaggctc ccgggtcgaa gggaagaagc ccaaggcgga   60
```

gaagcggctg cggcgggga agtccgccgc caaggagggc ggcgacaaga agggcaagaa 120
gaaggccaag aagagcgtgg agacgtacaa gatctacatc ttcaaggtgc tgaagcaggt 180
tcaccccgac atcggcattc cctccaaggc catgtccatc atgaactcct tcatcaacga 240
catcctcgag aagctcgccg gcgaggccgc caagctggcg cggtagaaca agaagcccac 300
catcacgtcg cgggagattc agacctccgt ccgcctcgtc ctgcgcggcg agctcgccaa 360
gcacgccgtc tccgagggca ccaaggccgt caccaagttc acctcctcgt agagtgtccc 420
tgccctctgt tctcgtactc agctgtccgg gtgtgtttgt ggcc 464

<210> 2419
<211> 445
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-001-Q1-E2-C1

<400> 2419

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ctccccatct agatctcttc tgctcatcaa ccgccgtgc ccttcgatcc gcccgcgctg 120
caagagctcg ccgccgcgtc agcaggaggc cgtcgcggga tctctcttct cctccctgcc 180
acgggatact tctccttgac cagcaccctg tgcttcctcc tgatctcgag atcgctgct 240
cgtcaatcat cgcgccgcag ctctgtcaag agctcgccgg agctaccctg cagcaccct 300
ttctcctaac gtctccctcg ccggagcttc tttctgccat gataaaatcc gctcaaggcc 360
atcgccacc gcctcgagct cgacgctcac gctcggtatc agccgctggc aagggccagt 420
gcgtaacttt tntgtgaaat attgt 445

<210> 2420
<211> 461
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-001-Q1-E2-E3

<400> 2420

acgcctgcag tactgtcgta gcttcgggt cgaagggtcc ttggtgttg tgggttcggt 60
aaagtattacc agggagagat cgatgggggc acaactaagg tggctatcaa gcgtggcaac 120

cccttgctctg agcagggcat acatgagttc cagactgaaa ttgaaatgct gtcaaagctc 180
cgccaccgcc atcttggtgc gctgattggt tactgcgagg acaagaatga gatgatcctg 240
gtctatgacc acatggccca tggaactctg cgtgagcacc tatacaagac ccagaatgcg 300
ccgcttagct ggaggcagcg tttggagatc tgcattggtg cagcccgtgg gctgcactac 360
cttcacaccg gtgcaaagca caccattatc caccgtgatg tgaagaccac aaacatcctc 420
ctggatgaga aatgggtcgc caaagtttca gatcttgggtc t 461

<210> 2421
<211> 375
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E2-E4
<400> 2421

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tgaagacgat gaagattccg ttgctagcga cttgcaactgc tttgagttga ccatgcatgg 120
agatgctgtg cagactcatg accttgacag aactcgacga acagtcgccg actgcatgta 180
ctcaccaatg agaagactgg agttttccga tgggtgtgtc gttgaaggct cgaggatctc 240
aatcgacagg cctcgttcag aaaagggcag ggtgaagcca ggcagcagca aagcacagct 300
gcatagtctg gcaccagaaa tcagctcccg caactgtgac aggatcgatc ctagagatgt 360
gcagaatgaa gcagt 375

<210> 2422
<211> 451
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-001-Q1-E2-F1
<400> 2422

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agaggatcatg cgcgtgggga taaggtaggg atagttgtag cgcgtttgcc aaaacgcgct 120
atagataatc tgaatagcag tagcgctttg catataaacc gctactgcta agtgtaacta 180
tacaaaaata tgtcaatgca aaaatacatt ggccatcaat gatctttttg tgtacaatct 240

aaattgtcaa tatgagtcct cttcggtagg aaccggagag gactcatatt gcagccacaa 300
 attttacaca tagagttcag tgaagaccaa ctggttgtga tagtttcaga aataacatat 360
 ttaaggtggt aaacaccctg ttcacggagc gaggtgggac taaacttggt ggctgatctt 420
 agcagtagca gttttctact aagcgcgctg c 451

<210> 2423
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-G1
 <400> 2423

cgggtcgacg ggcggctctt tggattaagc aggacaccag aagaccaaag tgcacaaaaa 60
 ccagcgtata atcaatcaca gatcaattcc acgccaagca actctcagat cctcgtgga 120
 tcagcaagca aatatttttg gcgcaaccat aacgctgcct tttctgtata ttgttcaact 180
 ctgaaaaaac tcccgtagaa aagttgaaac ctgcccatta tatacgcgac acccagctg 240
 accaaatact tctcctaatt ggactcgtac agatccaaac aaaccagaca aaatctagca 300
 accgacctat actccttttc cgatttaaaa gctcacgtac agactccaaa gactacgtat 360
 taggactctc caattgcaag gaaactaaat aaatattccg gccatgttga taacatagt 419

<210> 2424
 <211> 110
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-001-Q1-E2-H9
 <400> 2424

gtaccggatc atgaattccc gcgggtccacg gggacctctt aaagctgtcg aactaccttc 60
 aaggcatagc tgtactcttg aatcagccgt acatggccct cctaggcatc 110

<210> 2425
 <211> 453
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-A3

<400> 2425

cgcttgccgg tagtggtcct agcagcacgg gtcgacggga agcatcttag tggggcatat 60
aaggttgaga aggacaggct cctctctctt atacagaatc tggacgtcag ggccgaatcc 120
acgattttga tgcttgctga gctccagggtt aaaactgaag cagagaagag gttgaaagaa 180
cttctccgtg aagaagaatt gaagtgggct ttgcgggcta aggttcgcaa agtagtccaa 240
ggggacgcaa atactcaatt ctttcatctg attgctaatt gtaagcacag aaagaagaga 300
atattccaac ttgaacaaga tgagggcact attttaggac aggataacct aaaaacatat 360
ataaccgaat attataggca gttatttga cctccgaagg acagttgtgt gtctctcgat 420
gagtccagaa ttgacgatgt gcctcaactt tcg 453

<210> 2426

<211> 431

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-B1

<400> 2426

gggtcgtagg ggtcatattc tcagggccaa atgtatggta gtagctgaat catggatcac 60
aaacatagaa ctcagttcct gaggacggct gcaatgagac aaccacccat gtactcctac 120
atggcctctc accgctacct ttaccaaadc gtgttcacac acttagctca cacacagtag 180
gacatgttca cacacctctg attcatcccc gatgaatcag acctgactca actctaagca 240
gtagcaggca tgacaaacaa acatgaatga gtaggcacaa caggggtcaa acaactccta 300
ctcatgctag tgggtttcat ctatttactg tggcaatgac aggtcatgca aaggataaag 360
gggttcagtt accgcagcaa gtaacagttg aatcgttgtt gtcctaattgc attaaaagag 420
agcaggagcg a 431

<210> 2427

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E1-D1

<400> 2427

gggctcgacgg ggtaatctaa acccccata ccctaccttg catccaaacc cctctatggt 60
 cggtcgccg ctccgatcta ctatggctgt cgcctgcac tgctgtctta agtttactat 120
 atgctaccgc tgatgctgct gctgctgctg ctctaaaata ttgatgctgt tgctgctgct 180
 gatgcgtgtg gtgtgtcgtg tgctagacgc gtgatttttt ttacctgta cacatgaggc 240
 cgtgtggcct cattgccatg tttaattacc tgctgctact ctaagatgct ggcaaattgt 300
 ttgctgatgt taatgtctag tggcgtcga gagatctgaa agatctgctg tcgatccagt 360
 tcctccaatt ggcggctaaa gtgcatgaat cggggatttg cgcttgagtt tcttatcccg 420
 ccg 423

<210> 2428
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-D9
 <400> 2428

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 tgcaggaggg cgggcgcagg ctcaagggtg acgcctgggt cggcaccgc aagaccatgg 120
 ccgccatccg caccgccatc tcccacgtcc agaacctcat caccgggtca ccaagggtt 180
 ccgctacaag atgcgcttcg tgtacgccca cttccccatc aacgcctcca tcaccgccgc 240
 caaccgcggc atcgagatca ggaacttcct cggcgagaag aaggtagga atgtggacat 300
 gctcgactgg gtcaccatcc tgcggtcga gaaggtaag gatgagatcg tcctcgacgg 360
 caacgatatc gagctcgtct cccgctccgc 390

<210> 2429
 <211> 379
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-E1
 <400> 2429

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 gagaagtgtc aacgtgttta atctgacagc gcctgtaatt gtaggccctt tccgcatact 120

tcagaacgtg ttggcctatg aggtgatgca cggccgtatg ctgattaagg tcgactcggg 180
 cactcacaac aattgtaaca ttgttaaact gcagattaat ctcaagtaga catctaccta 240
 atacataagc cgcgggttgtt gtaggaaatt gaaatctggg gtgctcttaa ctgattaaaa 300
 cttggctgct ctagaagata caacctatat taggctttta tacaacttca tacctcttcg 360
 atactgtcac ctatcttca 379

<210> 2430
 <211> 340
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-E3
 <400> 2430

cctgcagtat ggtccgtgac atccgggtcc acgggacaac agccacaaca agctgcaact 60
 tgtcatgaag agcggcaagt acacgctcgg ctacaagacc gtcctcagga ccctcaggaa 120
 ctccaaggca aagcttgtga tccttgctaa caactgccct ccgctccgca agtctgagat 180
 tgagtactat gctatgttgg cgaatatcac tgtccaccac tagcatggaa acaatgttga 240
 tttgggaact gcgtgtggta actacgtccg agtctgacgc ctgagtatca tcgaccctgg 300
 cgattcccac atcatcgacg ctacaccagc tggccagtaa 340

<210> 2431
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-H2
 <400> 2431

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 aattgccttc cttatgtgtg aaggtcggga tcgcacgatg gttaaactcct accaaccctt 120
 cccctaggag catgtgtagt agtactttgc ttcgagggca agtagacttt tgcaataagt 180
 atatgagtta tttatgacta atgtgagtcc atggatatac gcacactcat ccttccactt 240
 tgctagcctc tattataccg cgcaactttc gccggtatca tgcacccatt atttaccttc 300
 ctcaaaacag tcaccatacc tacctattat gacatttcca tagccattcc gagatatatt 360

gccatgcaac tttccaccgt tccatattt atggcacact tcatcattgt catattgctc 420
 tttgcatgat catgtagt 438

<210> 2432
 <211> 444
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E1-H4
 <400> 2432

tggtcctaca ttcacgggtc cacgggacaa ccgtaacgag acgtcatcta tagtgtaccg 60
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 tgtaggctac ccaaggtagc ttacaaccaa cgctagcacc acccatgcct acctcacact 180
 atagaagcta gctccatcca tccatcaaag gatcggtcca cacactctca cgcacatact 240
 cattcggcca gaggtcacgg tcaacacgcc actagctatc tagctcattg ctactactct 300
 cagtctaata cagctccagg agcactttgt actgccgat gtacacccca gatataact 360
 cagacatgta agagtaaggg tattatctct ccggagagcc ccgaacctgc gtaaactagc 420
 gcgtgctacg cgcataatccg tctc 444

<210> 2433
 <211> 353
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-A10
 <400> 2433

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 agacgggaca cctccgcctc taccaagtgg tatcagattt ccagggttgc cggtgagatt 120
 ttacagtttt tcgtagttaa gatcgagtct gttcttcata cctatagtcc acgaagaagc 180
 caaacaacaaa aattaggggt agttcatccc atccgaacca atctgagcct tgcaaaatct 240
 tttctgtatt tgctttgttg aatttgcggt tgcactctcg tggtcagttg ctggtctcag 300
 cgtctagtcc tttggagttt cgagttctgt tcacaagttg tcacgccgct gcc 353

<210> 2434
 <211> 409
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E2-A3

 <400> 2434

cgacgggaag catcttagtg gggcatataa gggtgagaag gacaggctcc tctctcttat 60
 acagaatctg gacgtcaggg ccgaatccac gattttgatg cctgctgagc tccagggttaa 120
 aactgaagca gagaagaggt tgaaagaact tctccgtgaa gaagaattga agtgggcttt 180
 gcgggctaag gttcgcaaag tagtccaagg ggacgcaaact actcaattct ttcattctgat 240
 tgctaattgg aagcacagaa agaagagaat attccaactt gaacaagatg agggcactat 300
 tttaggacag gataacctaa aaacatatat aaccgaatat tataggcagt tatttggacc 360
 tccgaaggac agttgtgtgt ctctcgatga gtccagaatt gacgatgtg 409

<210> 2435
 <211> 399
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-002-Q1-E2-B1

 <400> 2435

ggcggtttct catggccaaa tgtatggtag tagctgaatc atggatcaca aacatagaac 60
 tcagttcctg aggacggctg caatgagaca acccaccatg tactcctaca tggcctctca 120
 ccgctacctt taccaaatcg tggtcacaca cttagctcac acacagtagg acatgttcac 180
 acacctctga ttcattcccc atgaatcaga cctgactcaa ctctaagcag tagcaggcat 240
 gacaaacaaa catgaatgag taggcacaac agggctcaaa caactcctac tcatgctagt 300
 gggtttcatc tatttactgt ggcaatgaca ggtcatgcaa aggataaagg gggttcagtta 360
 ccgaacaag taacagttga atcgttggtg tcctaattgc 399

<210> 2436
 <211> 353
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-B4

<400> 2436

gggtccagaaa tccgggtcga cagcgaggcc aagaaggact cggggatccc tcgcgtcggt 60
agtgtgtgtg attgggtctaa ccacttctag ctcgatgacc cttgttgtaa actgccaatc 120
ttgacactga atcgctgaga caccgcactg catctgcatt ttatTTTTga gcagtttaca 180
acgctctaga caatgctgtt tcaataaatg tactgtctga tgggtaatga tactgtgtga 240
agttttaccga tactcgaaga aactctgatg ccaccacctg gtggtagagg tttatcagcc 300
cccctatata tgtctcaata aataaagttc agtgaaggct tagtttgttt gtc 353

<210> 2437

<211> 441

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-D1

<400> 2437

cgggtcgacg gggtaatcta aaccccccat accctacctt gcatccaaac ccctctatgg 60
tcgggtcgcc gctccgatct actatggtcg tcgcctgcat ctgctgtctt aagtttacta 120
tatgctaccg ctgatgctgc tgctgctgct gctctaaaat attgatgctg ttgctgctgc 180
tgatgcgtgt ggtgtgtcgt gtgctagacg cgtgattttt ttttacctgt acacatgagg 240
ccgtgtggcc tcattgccat gtttaattac ctgtcgctac tetaagatgc tggcaaattg 300
tttgctgatg ttaatgtcta gtggcgctcg agagatctga aagatctgct gtcgatccag 360
ttcctccaat tggcggctaa agtgcataaa tcggggattt gcgcttgagt ttcttatccc 420
gccgtaagaa gtattttacc t 441

<210> 2438

<211> 434

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-002-Q1-E2-D3

<400> 2438

cgggtcgacg ggataaaaat atgatagatt ggataaatag atctcgaata aaagcaaatt 60

aaaataaagt gcagcaaggt atttttgtat ttttggatta atatatccga aaataaaaga 120
 aaataaaaat agatcgcaaa gacaaatata ataaagaaga gaccccaggc ccgtagattt 180
 cactagtggc ttctctcgag aaaaatatca aacgggtgggt aatgaatta ctgttgggca 240
 attgatagaa ctccaataa tcatgacgat atccaggcaa tcatcattat ataggcatca 300
 cgtccaagat tagtagaccg actcctgcct acatctactt ctattactcc acacatcgcc 360
 agctatccag catgcattta gtgtattaag ttcattggaga aacagagtga tgcanaaaga 420
 acaatgacat gatg 434

<210> 2439
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E2-D9
 <400> 2439

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 tgcaggaggg cgggcgacag ctcaagggtg acgcctgggt cggcacccgc aagaccatgg 120
 ccgccatccg caccgccatc tcccacgtcc agaacctcat cacgggggtca ccaagggtct 180
 ccgctacaag atgcgcttcg tgtacgccc cttccccatc aacgcctcca tcaccgccgc 240
 caaccgcggc atcgagatca ggaacttcct cggcgagaag aaggtgagga aggtggacat 300
 gctcgacggg gtcaccatcc tgcgggtccga gaaggtcaag gatgagatcg tcttcgacgg 360
 caacgacatc gagctcgtct cccgctccgc gccctcatca a 401

<210> 2440
 <211> 371
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-002-Q1-E2-E1
 <400> 2440

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 tgagaagtgt caacgtgttt aacctgacag cgcttgtaat tgtaggccct ttccgcatac 120
 ttcagaacgt gttggcctat gaggtgatgc acggccgtat gctgattaag atcgactccg 180

tcactagcaa caattgtcac ttgttagact gcagattaat cgcaagtaga catctacata 240
ctacataagc cgctgttggt agtgcaaatt gagatctggt gtgctcttag ctgattaaaa 300
cttgacgct ctagaagatc aacgctatat tacgcgttac aacaacttca taccacttct 360
atactgtcac c 371

<210> 2441
<211> 408
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-002-Q1-E2-E3
<400> 2441

cggtcgacc ggacaacatc aacaacaagc tgcagcttgt catgaagagc ggcaagtaca 60
cgctcggcta caagaccgtc ctcaggaccc tcaggaactc caaggcaaag cttgtgatcc 120
ttgctaacia ctgccctccg ctccgcaagt ctgagattga gtactatgct atgttggcga 180
agatcactgt ccaccactac catggaaaca atgttgattt gggaactgcg tgtggtaaat 240
acttccgagt ctgctgcctg agtatcatcg accctggcga ttccgacatc atcaacgcaa 300
caccagctgg ccagtaaacc tgtgtatgcc attttcagtg tctcgtctga tgcgtcatct 360
aaggtggttc taaagtgtag ttcttgctgg acttgatttg gtcttctg 408

<210> 2442
<211> 369
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-002-Q1-E2-E8
<400> 2442

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tgccgcgagg ctgcggtgat tcttcaattt ccgtggctac actcgggtgt gagctgcgt 120
ccaaaggggg ccgccgtcc tacgacgacc tgccggtggc tgcgctgcta ctatgccggc 180
ttgatgattt cccatctcta ttttcttgat tgctccgac tgcaccgaca tgcggctctg 240
ccgacgtcgt ccgatgtact gctaactctga ggccactgga tctgcaggac tggcatggga 300
ctcactgctg ctgccgggac tgcaacaatc ggggcagcga cgctttggcc ttggcctttt 360

ttttggttc

369

<210> 2443
<211> 433
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-F3

<400> 2443

cggggtcgacc ggtgggaaca atggtagtga gataatgtga tgcaacacta gaggtgccac 60
gtggagcggt taactgggtca actagtcattg tcatgagcaa atacagagtt gtacgggtgag 120
cccgtgactg tataataacc actaaacgta aatgggtgacc gtaatgagtg gatcctgaag 180
tccaatgtgc gtatcgtgct ttcgcttcaa atacaatgat cgtcattgca tatatcgtga 240
gagaaagatg aaacatgcgt gaattttctg ggggcttact tttagaggac ctggagatag 300
ttttgtgtgc atacgtgaaa ggggcgtaca ggggggtatgc gatggagaga gagatgctct 360
tcgtttctct ttattatgac taactttgta tatagtatat aaatatacaa attcacagtg 420
cggaaaaaat atc 433

<210> 2444
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-002-Q1-E2-H4

<400> 2444

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tatacctaagg gacaagcatg acatgcactt ggtctgtagg ctaccaagg tagcttataa 120
ccaacgctag caccacccat gcctaccta cactataaaa gctagctcca tccatccatc 180
aagggtatcg ctcacacact ctcacgcaca tactcattcg gccagaggtc acggccaaca 240
cgccactagc tagctagctc attgctacta ctctcagtcc aatacagctc caggagcact 300
ttgtactgcc cgatgtacac ccagatata tactcagaca tgtaggagta ggggtattat 360
ctccccggag aagccccaaa cctgggtaaa c 391

<210> 2445
 <211> 396
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-002-Q1-E2-H6

<400> 2445

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 accgttcccc ttccgcccgc cagagagacg accataaata aagcttacac aacatagcca 120
 acaaggagac cgttcggacc tggggctgcc gccgaggcgc gtgtgccatg catcacgatt 180
 gccaacaac taagattgca gaagccaaca tgatgaaagg ataatgcagc aaagacgcac 240
 gatgacgagg tagcgcagat ttgatttggg accttatgtt ctgccgactg tangggggac 300
 ccttctaga tcttgtcaag cttctccgcc ttcaccaccg ggttggcctt ggcgatggcg 360
 tccatggccg ccgcgcggta gtcaaacttg cactcg 396

<210> 2446
 <211> 180
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-003-Q1-E1-A11

<400> 2446

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 ctgatgcaat aaggcccga gaaatttgaa gagtttgttt gtaccttga atattataga 120
 gcatgcaccg agcaatcgtg atgtttgaat caaacgctcg ccttcaggcg cttgattttg 180

<210> 2447
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-003-Q1-E1-A12

<400> 2447

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 caaacattag catacatagg caccaggaaa ggaggcacag gcaaacctc aggttaaagg 120

ggtctcacca gaggattcag cttataaact cgggttcgca aaaggattca aaacaaacgg 180
 agcaacgaaa ctcaaacggc gaaggaaaca ggatccgttt actaatctgg acctatgtca 240
 aattttatag tagcaaaaac ttgttcaggt tgattaagca gaaagagggt ctcgggacga 300
 agatctaggg gcttgaatcg cctgattccg actaacgagc gaaaagataa acagaaacta 360
 agatcggatc anaaatcgcg atcagaaaaa tcgcggaata aatccgataa aaagaaaatt 420
 gacgaataga ctaa 434

<210> 2448
 <211> 379
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-003-Q1-E1-A9

<400> 2448

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 ttgaaaactt acaaattcaa caccttcaag gtgctaaacc aggttaaccc caaaatcggc 120
 atctcctcta aggcaatttc aatcataaac tccttcatca acaacatctt ctaaaagctc 180
 gccggcgagg ccgccaagct ggcgcggtac aacaagaagc ccaccatcac gtcccgggag 240
 atccagacct ccgtccgect cgtcctcccc ggcgagctcg ccaagcacgc cgtctccgag 300
 ggcaccaacg ccgtcaccaa gttcaactcc tcgtacagtg ctctgtctcc tgtgtctcgt 360
 agttagctgt ccgggtgtg 379

<210> 2449
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-003-Q1-E1-B12

<400> 2449

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 ggtgctccac gcgctagcaa atgccctcct gaagcatgaa actctcagtg gtgacccgat 120
 caggagacta gtttcgacag gacgacaagg agatggctct agcagtagcc agcaaaatca 180

gggaacacct tctcctggtg acgagttctc gaaactagta tcgactgaac aacaagaaga 240
 tggtcataac aatagcanac aggatcaggt aacaccttct cccaccggtg acgagattaa 300
 ggaatcagca nggagatgat cctaacaatg gtcagcagaa tcaggaaca cttttctcac 360
 cctagccttg gagacgctta tacaggaaga aatatttctt tgccatgatag atactaca 418

<210> 2450
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-003-Q1-E1-C10
 <400> 2450

tgtgccttaa ggtttaataa atcaccaatt gaatgttacc taagatgctc tggcgctcca 60
 aaaaatggtg ggaacctttc aatcctcaac ttaatccagt gaggaaaccc atatacagct 120
 atgccatcca ctagtctctt gacctcttga gatgtccaat gggcggtgtt tcttctctgc 180
 ccacgttttt ggcctctacc tgcagagtgc atgtaccgag agcatgggtc cgtggtaatc 240
 gaccaagtgc ctctcttctg tgcacttctc acgggactct catgcctcca atcactttct 300
 agcatctgat ctgaaacaca aaatgtatgc gtttaactac ctgaactatg aaaaatgata 360
 tagttcaact agtggccttc aaaattcata cccagtaga tcgcagcccc cctcctccg 419

<210> 2451
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-003-Q1-E1-C11
 <400> 2451

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 catcatggag gggttcacca ctccattgg tgccctctccg attatgcgtg ggtagttctt 120
 tgtagaccta cgggtccata gttagtagcc agatggcttc ctctctctct ctcttggtta 180
 tcaatataat ggtctcttgg agatccatat gttgtaagta cttttgcggt gtgtttgttg 240
 ggatccaatg aactttgagt ttatgatcag atctatgttt ttatccatgg aagttatttg 300
 agtcttcttg atctcttata tgcattgattg cttatagcct cgtatttctt ctccgatatt 360

tgggttttgt ttggccaact tgatctatct atcttgcaat gggaagatgt gctttgtant 420
gggttcga 428

<210> 2452
<211> 382
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-003-Q1-E1-C12

<400> 2452

cactctccaa tgtagtgtcg gtaactataa aatggtgagt gtcttgaaaa ctttctgata 60
attgtgggat ttgctttgta atggtaatcg tgaaattggg gtggttatgt tttgggtcaaa 120
aaaaaaaaag gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa gaaaaaaaaa 180
aaaaaaaaaa aacacaaaaa aaataaaaaa aaaaaaaaaa aaaaaaaaaa gaagaaaaaa 240
aagaataaaa aagaaaaata aaaaaaaaaa aaaaaaaaaa aagggggccc caaaaaagaa 300
aaaacctaaa ttaacggtga aagaaaatta aaaaccctta aaaagtgcc caaaaattaa 360
aataaagggg gggtttttta aa 382

<210> 2453
<211> 417
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-003-Q1-E1-C9

<400> 2453

aacacatcca ggcctctctc ccgtctcgtc ctggtcccc gtccctctct ccgggcccga 60
tttaagtcca gatgaatcct tgccggaatt ctggtggtgg tcaaagttcc ccgggttaac 120
tggttggaat atgccaacct gcaaagcctg ctgcaacaac agctgcgaag cccgcacctg 180
ctgaaaaaac agcaacggca gctgctgatg tagccaagca gattccatct ggcattccaa 240
gttaccgggc gaagaactat ttacgttcag atggccagaa cacgggcaac ttcctttacg 300
agcgtccttc aaccaaagtt catgctgctc ctggccggtg gctcgtccct gggctacttg 360
tttggcggaa agtgatgtta atgatggtgc ctgcttaatg aacgagcgat gaattgg 417

<210> 2454
 <211> 210
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-003-Q1-E1-D10

 <400> 2454

 tctaaaatta ccatcttcat atctcaaaac aatcatcaag taacaacctt ctcatagtat 60
 tcaatgcact ccatatgaaa gtttttaata catccctaata ggatgcctat cagagtaaga 120
 ctaaattcat caccaaagaa aataggaacc gtgacatacc tccttgggag aacaaatgct 180
 tgtatgggaa aagtgaataa aacaccaatc 210

<210> 2455
 <211> 408
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-003-Q1-E1-D11

 <400> 2455

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 aggtcagtga aaggctcctc gccaaagacg ctgcgcaaac gatgaactaa gcctagccct 120
 ataagtattg tcagagcata tgccatgtag tttccctttc agtctgtcct gattttgacg 180
 acgaactcga acccttttag cagcactgtg gaatcgtatt gtgggtttct gattcgtgtg 240
 tccgttctcc agacttctgc aaagatcaga tgaggtttac ccatgtttgg attctatata 300
 gttttatgtc ctttgtcgag tctgaagtta gttgtgtttg acatcttcca aacttggctg 360
 gcttttggtt aacatgcaat gacgaccagc tcagagtgat cattactt 408

<210> 2456
 <211> 354
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-003-Q1-E1-D12

 <400> 2456

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 acgacggcta cgactagtct cacatttgc ctgctggcga atggtcgcac cccatttggc 120

gctcttgatc tgggtgcggcc tggccatatt tttgtcacia caaagcgcca ttacctggag 180
aacttgcgtt ttgcttagct gctattgagc atgactcggt tctgatggga ctcttttttag 240
tggtttttgct acatgatcgt gtcgcctatc tgggtactatg aactaaacac gggaaaagaa 300
tggatcagtg ttagttgatc cttggtcaaa aaaaaacaaa aaaagcagac aaaa 354

<210> 2457
<211> 397
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-003-Q1-E1-E11
<400> 2457

ctcccgagtc cacggggatc agactgatca ggaaaacaga tatccagccg gatagcctgt 60
atgtcctagc ccgctatagc ctgatgctca tgtcgagtac gattgatcgt caatcgcaca 120
gactacgtcc actgcccaca atgataccac cgtcaccaag aaccacggaa ctactgacag 180
ggttgattca tccacatcgg atggaccaga taccaccact tctatcctag atgttgatgc 240
gggcagccat caagagggat caactgttcc tgctgctaca aatgtacatg tacggaacac 300
acctgtatct tcagatcaag ctgtctcgaa tgaacagcgt gacatagtct ctgaactaaa 360
catcttctac ataccacatc tgcggggcac gtcacaa 397

<210> 2458
<211> 422
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-003-Q1-E1-E12
<400> 2458

acgggtaccc atgatgctaa taatatgcaa agctacaagc ttggggattc tatgtttgat 60
gattatcata ttttttgtcc cccaagtttt gatgagaata tttgttatga tgaaagcatg 120
cctcctatct atgatgattt tggtgatgaa agtggggttg caagagtgtc aacttttagga 180
agtaatgac ccactatctt gaagggtggt gaatcttggt gtgataatta tggaagtgga 240
tttgagagg tcatgacttt atttagtgat gaatccacta tttcggaaga gggtccaata 300
gactatgaga ataaagttcc tatctatgat gattattgtg atgacatgta tgctataaag 360

aataattata accatgaaac ttgtcatcat gattttaatt ttcaattgga tcatgcctca 420
ca 422

<210> 2459
<211> 454
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-003-Q1-E1-F10

<400> 2459

cggggtccct aaaaaaacgg aaaacaaaa cggggggtcaa aaatccgtat aaaatggcaa 60
gcaaccggca atcccaaaag caaaaaacca aaacaaacac ggcaaataca cggaagctaa 120
aatgcatgta aaattaatta tcccgagggtg aacatacatg ttaccaaagg agggacattt 180
taatttcaaa aaaaaattac agagatcatt aagacgtttt agtacattga ttgattttcc 240
atgggtataa tgtgaaaaaa tcaaatttga gctacatcac acgtgacagt gcacctaaat 300
ggattgcaaa aacacacgtg tctcacaggg tgcattgtta ctcccatgc aacanatttc 360
aaacattgag aatcttgatt tttaaattct aatacatcca aaacttattt gaagttcatg 420
aaacttatcg tgtgtcata tggacaccaa taca 454

<210> 2460
<211> 344
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-003-Q1-E1-F11

<400> 2460

taatagacag attcctcatg tccaccaatt tatttcagaa ctttctgagt tacagaagta 60
ttcgaaagtt acagattact acagattggt ctatttttga cagattctat ttttcgctg 120
ttgtttgctt attttgatga atctatgagt aggggtatga accatggaga acatggaatg 180
cagtagatat tacaccagta taaataaaga atgagttcac aacactacct taaaatgggtg 240
atttattttc ttatactaac gaagctcatg agattttctg ttgtgaagtt ttaatgtttt 300
gggtaacgat ttgatggatt ttggaataag gagtggcaag agcc 344

<210> 2461
 <211> 313
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-003-Q1-E1-F9

<400> 2461

ctactaaaac cctaaatcaa ctgcggggtgt tgtttaaaaa attttgcgcc cggatatttta 60
 atcgtacggc aactgctaata tagttatcaa ccgctctaag gagctattgt actgtcgtgt 120
 cgcgttgtgt cngatttgct gttcaattag tagttgcggg ggtgaatgcg tggctagaga 180
 tgtttcatgg ccgtgcaatg aactgcatgt cgtcagctct gtatccgtcg ttggtgtgtt 240
 gtgttttcta gtttataaat ctgatttaca aaananaaaa taagaaaaaa aatataaaga 300
 ttatttttaa ttt 313

<210> 2462
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-003-Q1-E1-G10

<400> 2462

ttaatcacc taaaataatg ttgggaacct tggagattaa ggccaaaatg acctccacaa 60
 ttgacaacaa caacttgaat tacacaatga ccaaaagttc aataaccccg cacaatctt 120
 cctaacacca aatggccatg aacagcgacg gcggcctcag catgccagcg acgatcagaa 180
 catcgacaag gccctccgtc gccggtgggc caagtcagga gaatcaccat agaataaaag 240
 aaacagctgg aaacttgngg ctgtacaatg agggatgac tgtcaaactg atacggggag 300
 cttagtttgt agtgggggtc aaaaaccatt catttgcagt gtattcagcc caagtaattc 360
 gaaaattttg ggttgagagt gtgaagtaca gatgttggtt gaaaa 405

<210> 2463
 <211> 448
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-003-Q1-E1-G11

<400> 2463

tccacgggct actgtaaaac gtatctcatt aagagcatgg tggtaggtttt attttataga 60
aataattggt ctgtcatgct tcacttatat tattttgaga gtcctttaga acaacatggt 120
aatttgcttt taggaataat aaaaactttc atataaagtg cattgaatac tatgagaagt 180
ttgatacttg ataattgttt tgagatatga agatgggtgat attagagtca tgtagttga 240
gtagttgtga atttgagaaa tacatgtggt gaagtttgtg atttcctgta gcatgcacgt 300
atgggtgaacc gttatgtgat gaagtcggag catgatttat ttatcgattg tcttccttat 360
gagtggcggt cagggacgag caatggtcct ttcctaccaa tctatcccc taagagcatg 420
agcgtagtac tttgtttcga taactaat 448

<210> 2464

<211> 400

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-003-Q1-E1-G12

<400> 2464

tggaaatag taaatattac accaatatga atttagaatg agttcacaac agtaccaaaa 60
gtggtgattt attttcttat actaacgtac cttacgagtt ttctgttgag ttttgtgttg 120
tgaagttttc aagttttggg taaagattcg atggactatg gaataaggag tggcaagagc 180
ctaagattgg ggaagaccaa ggcaccccat ggtaatatat aaggacaacc aagagcctaa 240
gcttggggat gcaccggatg gcatcccatc tttcgtcatc gttcatcggt aactttacgt 300
ggagctatat ttttattcac cacatgatat gtgttttgct tggagcgtca ttttggttta 360
ttctgttttg cttgctgttt gaataatatc tcaagatctg 400

<210> 2465

<211> 397

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-003-Q1-E1-G9

<400> 2465

agtcgaagaca gatgtcctcc acgcaacaca tcgagctcgt ccccccgctc cggcggccct 60
catcaaacca gaaatgccat gtcaagaaca aggatatcag gaagttcttg gacggcatct 120
acgtcagcga caagggcgcc atcaaggaag agtagagagc cggaaccgt cncgcccacc 180
agaagccgtg tttctgcctg ccgtgtttgt ttcacgtgt ttgtgtctgt ctgtcgtcgt 240
cgtcttcgtg attttgaact ttctctagac tgaattttgt agcggagtta aatttttagg 300
gatgtgccgt ggaacatgct atctttattg ttatcctgca tatcgtcgcc gccgcgagaa 360
ccggtgcgac gcttatctag ccctaaaggc tgaagac 397

<210> 2466
<211> 379
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-003-Q1-E1-H10
<400> 2466

ggcctatccc gttttgtccg acaaggggaa aagggccatg tacaacgccg ggctctttga 60
tcccctcgac gacgacgacc agtattttctc ggacttcatg cacgagatgc tggatgatgat 120
ggatagcgtg aaaaacgaga agccggacac gctcgatgac ctgcagaaga tgctggatga 180
catagtcaac ggcgacggcg gtagccgcgc cactgctggt gctggtggta gcggcggcag 240
tggtggtggc tgcggtggtc gcgttccacc ggaggccaac cgcataactc gtgtcacccc 300
ttaccgcgag ccttcgcgaa ggtgatggac gcgccggtgc tcgtgacgtg cacgcaccgc 360
tgcgcttgta agatacaga 379

<210> 2467
<211> 407
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-003-Q1-E1-H11
<400> 2467

cacgggaaac gaggaagatg gtaggggtgg ggtttggatt acctgaccat atcgacgaag 60
ccgcacaaca agaagaaggg tcggcggcaa ggacgccccg cagcacgaag aagggtcgcc 120
ggcgatgaag caacgtgca agaagaaggg tctccggtga ggaggcggcg cttcaagaag 180

aaggttcacc ggcgaggagg cggcgctgca agaagaagg tagccggcga ggaggctgag 240
 ctgccagtaa gcaccagtga aggtttgaac ttggaaagtg atacgtccat tttgcatcat 300
 gcttttatat cgatatttat tgcattatgg gctgttatta cacattatgt cacaatactt 360
 atgcatattc cgcgttaatc tgcaaggttt gcataaagag ggagaat 407

<210> 2468
 <211> 376
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-003-Q1-E1-H12

<400> 2468

cacggtaagt caacgcttac ggattcgcta tgtggatttc gcgagatccg caacacaatc 60
 aacctctccc ctctcatgtc gccaccaag gtgatcgccg ggccagcctg tgtggttggc 120
 gatgaaggtc gtggtgagat ttttgctgat tcgttcgctg gcgaaggacc ttggacgcca 180
 aggcggcgcc ctcggacggc gaggaagcgt tcgtcagatg tgctagccgg ctccctcggc 240
 tacacgggtg gagaagattc ggctgattgt ggtcgcaacc cggattcccc accttctgct 300
 ccagatctga agactaagaa aggtttggag gactccatcg gcatgcacac ggtccaatgc 360
 tacaaatgtg agaaat 376

<210> 2469
 <211> 175
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A1

<400> 2469

cgggacagaa tgacgaacct atataaccag acaatcccag gaaaatggag ctcggaagtc 60
 gagcttccag aggagaaacc ttaactagtg tggctcgggt atttcatcta acacctcat 120
 ggtgcataag gaaggtgaag ctaagaggca acccaagatg cccctcccc tcctt 175

<210> 2470
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A11

<400> 2470

ggtcgacgac gaggatgcag gctaggcatc attgacatcg agaacaaatt ctatgcaaatt 60
ttaacatttt ttaaattgctt ggattgcatc ttcttatata cgagaaacct ttagtccgtg 120
gctaggaata tgattcagaa tcataaagaa ttctcttaac ctttaaggga tttaacaaaa 180
tggtgtcatt ctggatgtgc agaaaatggc ccatattttt catgatctca tctacccttc 240
tatatgccat gttgtctagt gtcaagggat tcaataaaac catggcttca tcattagctg 300
gaagtaacag gcgcatgatg gtacgaagct ctccaaagtc gtcttggaac ggaatcccgg 360
ataggataat tagctttatg gtatgaagtt cagcaagagc cttccgaata tcgct 415

<210> 2471

<211> 440

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A12

<400> 2471

ctcgcgggtc gacgggatgc ttggactcgc tgaatcgtat tatcagccga ctaggagaga 60
aggctctccc cctgtactga ctcatgaaga agtccactca cttcgagtgg aatgaccaag 120
ccgaccaagc cttccatgag ttgaagaaaa tgctgaccac tccgcctatc ctggcagcgc 180
cgactgaaaa ggagcccatg ctctcttaca tcgccgcgac tagccgagtc gtcagtactc 240
ttgttgtggt ccagcgccca gaagaaggcc gagccagct agtccagagg ctggtgtact 300
acctaagcga agtgctatcc agctcaaagc agaactacc gcactaccag aagatgtgct 360
atgggggtata tttcgccgcc aagaaactga agccctactt ccaagagcac cccatcacgg 420
tcgtgtgcac cgccccgctc 440

<210> 2472

<211> 411

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-A7

<400> 2472

gatcctacca tggtttagcag caatagaaac acacaagaat atgacccctac aaactactag 60
 aaaatggcgg tgggtggggtg tcacaaatcc gtcaagcaaa tctcaaattc ttaccagttc 120
 ttaccagca gcaggtggtg aacgacaacc gttgtagtca aaactctcaa agcttggata 180
 gagcgattac cagggagagt caaacgcatg acgtagatgt atgtggagcg aggaaggctt 240
 ataatatggt agcaaaaagg gtcagcaata atcaattcag agatgcaaag ttgaataaac 300
 gctcaacgac ggtactgtgc tggtcctagg ctagaccgtg ctagagacgc gagcctagag 360
 cactaacaaa atcacggcgc tgcacgtaaa caagggaana gcacactccg g 411

<210> 2473
 <211> 190
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-004-Q1-E1-A9
 <400> 2473

gagacaaaca gggacgagag tgcactctgg atccagccca aggagctggg ctcttacacc 60
 agcaacgagg acaactggat cgaagggtgt aacgaaacga cgcacggcc tcaggggagc 120
 cttggacact acagtctcct tctgtagtct cctctaaacc gagacaaaag tgcaaattaa 180
 gcgctacccc 190

<210> 2474
 <211> 190
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-004-Q1-E1-B1
 <400> 2474

actcccggga cgaaggagat gggggattaa tttctagagt tttgaaagtg gaaggactaa 60
 aatgcaaaaa atcaaatgta ctatcnccgc gacattattt tcaagacgga gggagtagta 120
 gtattatttc ctgaaaaaaaa aaaaaaaaaa ggaaaaaaaa aaaagaaaaa agaaaaaaaa 180
 aaaagggggc 190

<210> 2475

<211> 431
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-B12

<400> 2475

tcgtggggtcg acgggactcc ctaaggatat tcatagaacg gtgtcaatgg agagaaacag 60
 caggatgccg tcaatgggaa gccaaagtcg cctgtggcga atggtgttaa cggggatgcg 120
 aaggttccgg cagagaaagc cgctgccacc gctgctcttc cggccgttac ctacgcggcg 180
 aaggtggccc aaacagcagc ggccgagaag aagcctgtgg cgaccgagaa gaagcctgtt 240
 gtcgccaacg gtgctgtcaa gaccggagta gctgcttgat cgcattaccc gatcctccca 300
 gctagccatg aagaacaaac ggacgggtgct ggccaaccag gcgagacatg cgggttccaa 360
 ggtactgatc atcaaagggtg gcgtctggaa agcgggtcgg atagttaggt ttccctagct 420
 ctctcctttt t 431

<210> 2476
 <211> 402
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-B3

<400> 2476

catgggggtc ttagtcgtac ttatcaaaaa gataaggag gcaagttggg aaggacggag 60
 ctcagcacgt taggcaccta gtgtcatctc agtgaatgag gcatagatga acctctcgag 120
 tggaatttca agaaaaacat cgagagcgag tacgaggtag aataagaagt tccaagttgt 180
 tagataatcg ttcatgtctt gaaacaaagt gtgaaagggg tactgactaa cgcgagaaag 240
 tattgctgtc gatgccagaa tagatcagta ggaaggtggc tcatggtcta cataagaagc 300
 caagcgtggg gaataacttt gggaacaggg ggtgtacacc aaagtcaggt tttgatcgtg 360
 tggaagggtt atgggcccac catgtgggaa aagtaggaag ag 402

<210> 2477
 <211> 208
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-B6

<400> 2477

acgggacaac ggataatggt tcgtaggatt tatgaggtct cgttgttttt gcatgctagc 60
aaattactcc gggatgagag ttttatgatt tcgcttgtgt tcaaggattt tactattatt 120
agtgccttgta tcctacctgt ggtatcgta tagtttgctg ggtatggaag cccttttatt 180
ctgcttaaaa actgtatttt gcctggaa 208

<210> 2478

<211> 431

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-B9

<400> 2478

cccgggtcga cgaggtagct taagatgctg ccaggtccaa ggacaaggct gcacaaacct 60
cgacgactgt acatgttccg cgccactctc aggaggcgca agaccaacag cgatcatggca 120
cttgcaagtgc catacgcatg ataggccaag accaagctgg tggatctcgg ggcgctcaag 180
accagcatgc acgccagcgt gctggcacga gcggggcacg gtcgcctgga cgggatactg 240
ctccttctaa catagttaga agtccgagca cgacccgctc ctgcgcccgt ccgccactgc 300
caccaccac tctagcagaa gctttggcgc aagctcaact gtccttagat taccctccga 360
cgtcggacaa gatcgacgaa tggagggtca ccattcagag tctcatcggc tacgccaacg 420
gcgacactcc a 431

<210> 2479

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C10

<400> 2479

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acctttggat tttaaagaaa ttacgtcaaa ccaattgagg gatttattta tcacggaaag 120
ttgaacgaaa accatgcaat tttctatggt ttgcattcc tacaccaga ttcgttaaga 180

tttctagcaa acagggttagg cctcaagggg tcttctatgt gtcttacatg catcttctat 240
gttttcaaaa ctcttagaaa acatcttgta gaacacacaa agagctttac acataaatcc 300
aagtgtgttg attccttgta aagttgtaaa attcaagaag ttgtgtcatt ttcaatcgtg 360
cattttatta ctgtcttat gagaattctg cgctccaatg gaacggttcc caa 413

<210> 2480
<211> 297
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C11

<400> 2480

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cgtacaccga cgtcccagg atcaaagatc attcgggagc ggccgcatta taatccggac 120
ccatgttctc cgcagcagtg gaacgacttg tggataggaa ctgcatccaa aacatgataa 180
tccagcacgt gtccgtgtaa gactgctga gtcctacctt gtagattacc taaaggttca 240
agtacgaaag agtacacggg cagtagtgtc acgaatgttt cagtgtaaag gaccgat 297

<210> 2481
<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C12

<400> 2481

gggacactct cacatcacgt cgtgactagg cgcgcgatcc ggcggctgag cagccgcacc 60
ttcgtgcggc ggctctgaat gccgcgcagg aggagcacga caggctcttc accgacgaga 120
agctcgcaaa aaggagatg gaaaggtag tgcagaaaca aggcattggag cggattgagg 180
gatggccggt gggtgtgatc cgtgggttgt tcttcttttc agttctttgc tcccagattt 240
cttgcggtt tgcaacagca ggcttctatt actccaggca gatagagtcg cgctgtgttc 300
tcggtccgct tgatatcttt gctttcgtgt tgattggagt cgtttcactg ccgtaccatt 360
tgttcctttt ctgggtttct ctgggcggga actaatgatg tcgatgatga gtttc 415

<210> 2482

<211> 431
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C2

<400> 2482

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tcacctgcaa attcctcagt gaagaattca taaaaatcgc ctattcaccc ccctctagtc 120
gatataacgc acttttcattg ggaggcaacc aaattttatt tttgtttctt gtttttgttc 180
ctgttttagta ataaataatt catctagctt ctgtttatat gtgggttttat gcttttaatt 240
agtgtttgtg ccaagtagaa cctttgggaa gacttggggg aagtctttgc gatcttgctg 300
taaaaaacag aaattttagc actcatgaga tttgctgcc tttttactgg agagtgcgat 360
taggtttatg attttttcag atgattaata gaaaaattcc tcatgtctga caatttat 420
cagaattttt g 431

<210> 2483
<211> 392
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C3

<400> 2483

tgcacgggac gtgctacact tataactttt gagcgttata attttgctct atgtgcttca 60
cttagatctt ttagagcacg gtggcggatt catgttaaag aaactattga tctctcatgc 120
ttcacttaaa ttattttgag agtctcttaa tagcatggta atttgcttaa taataatatg 180
cttgggtattc aagattttgtg aaactttctt ttgagtgtgt tgcatactaa gaaaagattg 240
aagcatgata attgttttga gatatggagg tgataatatt aaagtcatgc tagttgagta 300
gttgtgaatt taaacaatac ttgtgttaaa gtttgtgatt ctcgtagcat acatgtgtgg 360
tgaaccgtta tgtgatgaaa tcggagcatg at 392

<210> 2484
<211> 438
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C4

<400> 2484

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gtacaccctt tagttcggac ggggggttta ctgagagccg gatgatctca gaagtttggt 120
tgggttttcc aggcgctttc catcgcacag tacctcagta ctatggccgc caagtcagcg 180
aactgtgtta tgtcacggcg acttatggca ttgaggattc cttgtccgt gcaatttttg 240
caaaagaatg aaattgcgtc ttctcgcga cagtccttga cttgttcat tacaacgagg 300
aatctggccc aatagtgaag tactgtctct tggggctctt gtctaattgtg ggaaagatca 360
cgtgtatccg ggtgggctgg tacatctaag tctgaaccg taccgatcc gagacccatg 420
ggcgggggaa gttcccaa 438

<210> 2485

<211> 396

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C5

<400> 2485

ccgggccgac ggagaagaac acaaggcgga gaagcggggc cggcggtcca aggaggccgg 60
cggcgagggg aagacgaggg gcaggaagaa gggcagcaag gccaagaaga gcgtggagac 120
gtacaagatc tacatcttca aggtgctgaa gcaggtgcac ccagacgtgg gcatctctc 180
caaggccatg tccatcatga actccttcat caacgacatc ttcgggaagc tcgccgggga 240
gtcggccaag ctgcccgt acaacaagaa gccaccatc acgtcccggg agatccagac 300
ctctgtgcgc ctgctctcc cgggggagct cgccaagcac gccgtctccg agggcaccaa 360
ggccgtcacc aagttcacct cctcctagac aactta 396

<210> 2486

<211> 438

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-C9

<400> 2486

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 acccctcccg atgaacagga cctccgtttt gaccatagcg ctccaacaca agtccgtttc 120
 atccgttttg tggtagcca cgccctcct gatcaacagg accctgtttc gactgtagga 180
 ggtccaacac aagtcctttt cctccgtttt gcggtacact agaccctcc cgatgaacag 240
 gatcccgttt caaacgtggc cggtcgaaca aaaggccgtt tccttcgttg tgcggtacgc 300
 caggcctcgt ttccattggg tgttctgtcc aagccggttg gctcccatgt gttccattgc 360
 ctcccgatga acacgacgca ttccgttgcc tctcgatgaa cagcagcat tccgttgcct 420
 cctcatgaac atgacgat 438

<210> 2487
 <211> 366
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-D11

<400> 2487

tccattgtga gaagagccct tgtgatcatg caccagaggg acgaagtgga gtacaagagg 60
 gagcgccatg tgattgtccg caaggcttga gctgaaccga aatgatggaa ctaccatgga 120
 aaccctctgg ccatctgatg tgtgtgtata agtagtgctg aactgcagc ctgtttcctg 180
 aggaaatttg ttgcgtcgtt gaaattgagt tgtagttgta ctactttaag ctgtagctgt 240
 agccctaaat tatcttgtgt cgaactgaag atgtaccaca gtaagttcat tcaggatcgc 300
 aacatttggg cgttctgcag ctgagcagag ttaatgccta ggaaaaaaaa aaatgaaaaa 360
 agagaa 366

<210> 2488
 <211> 394
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-D4

<400> 2488

tcgacggggc gctgccgctc tttaaaagca aggtttgaag aaggtaaagc ctgtaaggag 60
 aaaaattccc atccctttca aataaagacg cgagaacttt gaaattcatt ccaaatagtg 120

gcaaaccagc tatagaaagc aagcaaaaga atagtcgcgt cgggcaccta cactagtctt 180
ctgggtcttcc cgccagcgcg aagcatggaa cttccactaa gacgtgggtg ggacccccgt 240
gaggtctctgg ggcaacactc aggagactcc ggggcgtgta aaacctcact cattattaca 300
tagagtgtca cgagcagaga cctatgaggc gcatgggtgat aaccacaag tttatgggga 360
tcgcaacagt ttttgagggg agagttatta accc 394

<210> 2489
<211> 385
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-004-Q1-E1-D6
<400> 2489

cgggtcgacg gacataaaca tccttatatc ttctcaaaa cagccaccgt acctacctat 60
tatgacattt ccatagccat tctgagatat attgccatgt aactttccac cagtccgttt 120
attatgacac gcatcatcat tgtcatattg ctttgcatga tcatgtagtt gacatcatat 180
ttgtggcaaa gccaccgttc ataatttttc atacatgtcg ctcttgattc atcgcaatcc 240
cgggtacaccg tcggaggcat tcatatagag tcatattttg ttctaactat cgagttgtaa 300
ttcttgagtt ataaataaat agaactgtga tgatcatcat taatagagca tttgtcccaa 360
aaatagaaaa aaatagaggc cagag 385

<210> 2490
<211> 141
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-004-Q1-E1-D9
<400> 2490

cacgccagct gatatggacc ctatgcatag ttgccatcc ttactgggta acgcgattct 60
caatgtgttc ggacatatca caccatgagt ctggaaacat aaccactgt tatagctagc 120
cgtacgaaca tgtaaggatc c 141

<210> 2491
<211> 202
<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-E2

<400> 2491

aacagacagg ttcatcgtcg atgaagtgga tcgtctagct tgatgtttat gtacagttgc 60
gtcatcaaag ataacttgta ctaatgctg tttgagtttc ggatgggata atgtacggca 120
gtcatcaagc tctgttagat tctttagctg ataaaaaact gtcatgactt gatttgcct 180
gtagaattt catcactgtc ct 202

<210> 2492

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-E3

<400> 2492

cgggcactac ttatatattg catatgtatt gtctgtgaat tggactaac gtttcgtttg 60
gctactgcat agcgatgccg tggatgtcg tgtacaaggg taagggtccc ggagtctacg 120
acgactggga ggagtgtcgg agacaggttc accgattcag cggtaacagt taaaagggt 180
acgccactag ggccgaggcc gaatctagat gcgcccgcta tctagcggga gaggggaggg 240
agcgttggag gaactggatg aagacgagtt tcatcgtgat gatgctcatc gtgatgactg 300
cagctctctt ctatgtgatg gtagttttaga tgaccgatat cgacttgtaa tgtgaagaca 360
aactcgcggg ctcgagactt gtaataaaat gttctatctt tgtttgggtct tttcaa 416

<210> 2493

<211> 392

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-E4

<400> 2493

cggggccatc taaccatgga agaccttcca gagcctgcga gcaatcgggc ttgggtcgcc 60
ttcagccttc ggaacatcca tactcctcca cctcgtcctc acttatacta ctcaaccggg 120
atggatgcct tcccctctgc tgcgatcca tataaagaac atccacaggg gcaagcacgg 180

gagcgcattct gagacgtatg acacagaagg gaggtttgaa ccagcgaaat tcgatgctat 240
 attcagcaag tttggcaaaa ctcggccaaa tgctttgtca gaagatgaga ttaacgccat 300
 gcttaaatac aaccgcaata tgtatgattt cctgcgctgg gccgcggcca acctccaatg 360
 gaagttgctg cacaaggtgg gcaaagataa cg 392

<210> 2494
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-E6

<400> 2494

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 acgaaaatac gtgttgatag atagtcaagt tatttgtatc atcttctctg caagaaaagg 120
 aagttatacg tatgaagcaa agttttgtag tacgatttac ctgggtccatt ggatataaca 180
 tccagctagt aactcgttga ttttctgggt ccacctaatc atcctggaga aagtaactcg 240
 ttgtttcttct cccgcgctta acaggaatcg aacgctgaat ctcccgtat tgtgggggca 300
 acgatagcca acagaccaat caaaccttgg tgacggacat gctgtaggta ctgtaggagt 360
 actgtagcta gtgcgttttt taagacgaac atgaaatatt aatttgaact ccagaaaata 420
 tttttttt 428

<210> 2495
 <211> 420
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-E7

<400> 2495

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 aatgacttaa cagaacttta cgaaatgcat taaaacttta aaaagtgata caacatatac 120
 cgtttatcag atgacactac ttcacacatg acatatgctc atcactacga aacagggtccg 180
 aatacacaat ctgttcaacc accacacatc actagcatac cgaacatgca aacgtcccc 240
 tctggtcagt ctgtccaaaa atgccaacaa tgggggatac tttactggat gttttcccc 300

ttcgcgagta gcacctagta ctgcgttaga tcaccctage accgtatatt gccatgttat 360
gctttgtgat gcttcaaatg ctctgttaat tactgtgttc cccctccgtt acctctttcc 420

<210> 2496
<211> 359
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-F1

<400> 2496

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cgaccgggga caaggctgtc gtgcccgtgc tcatcccgaa cagtcgctgc atgcgcgccg 120
cgtcagcaca tctacggca ggagggcctc tgcgcggccc tgttccagga gcaccatcca 180
gcaggtggca ggggatggag acaatccgcc cgagccactc cggcgacgaa accctagcta 240
ataagatggg ttgagagcga gcgttggtgg ccgggtgtag taaatctaac cggatgggat 300
gaaagagccg agcgagggga acatgggggt gtgctgggcg ccggccatac ctgacagaa 359

<210> 2497
<211> 454
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-F2

<400> 2497

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aaagatgcat gatggctata ttctctgact tttgtgaaaa gatttgtgag gttttcatgg 120
atgacttttc catctatgga tcttcttttg atgattgctt gagcaatctt gatcgagttt 180
tgcagagatg tgaagaaact aatcttgtct tgaattggga aaagtgccac tctatggtta 240
atgaaggtat tgtcttgggg cataaagttt ctgaaagagg tattgaagtt gataaagcca 300
aggttgatgc tattgaaaag atgccatgtc ccaaggacat caaaggtata agaagtttcc 360
ttggtcacgc cggattttat aggaggttca ttaaagactt ctcgaaaatt tctcgggctc 420
tggacaattt attacaaaaa gatatacaat ttgt 454

<210> 2498

<211> 357
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-F3

<400> 2498

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 ttcacttata tccttttagag catggtggta gttttatttt gaagaaatag atgaactctc 120
 atgattcact tagattattt tgagagtctt aaatagcatg gtagttttct taaaatccta 180
 atatgctagg tattcaagaa taataaaaatt ctcttatgag tgtggtgaat actatgagaa 240
 gtttgatact tgataattgt tttgagatat ggagatgggtg ctattagagt catgctagtt 300
 gagtgggttat gaatttgaga aatacttgtg ttgaagtttg tgattcccgt agcatgc 357

<210> 2499
 <211> 421
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-004-Q1-E1-G12

<400> 2499

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 tccaagccag tctgagcctt tgcaattttt tttcattgct tgcatagttg aattatcagt 120
 tgcacatcg tgtcgagttg ctggtcttag tgtctagttc gtttaaagtt tcgagttctg 180
 ttcacattag tcatgccacc gctgcatcat tatctcttcc actgtccact acccatccat 240
 caatttccac cacgtgctac ccaccattca ttgtcataat aatagttgag attgttcaca 300
 tcttcacttg atccaatctg catcttatct agtttgtttt ggaaagaggg agaanaaaag 360
 agagaaaaaa acgagaaaaa aaaggagaaa aanaagtcag agaaaaaaa ggagagaaag 420
 a 421

<210> 2500
 <211> 162
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-G3

<400> 2500

tcgacgggac caatgaaaga ttccagtgtt attgactttg ttaacacggg atgcaccctt 60
cagtacagat aagtggagtt cgaagagttt gcggcttccg ccatcagcgt acatcacatg 120
gaagctctgg agtacctgcg aacagcatgc tcagcacgcg ta 162

<210> 2501

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H1

<400> 2501

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agtgaacatg agaagactag ctctccgaa acatgatgat caaagatcca gcctcaatag 120
tttgtcagga aaatcattaa attctccaga tagctctggc ttcggtcggg cattgtcaaa 180
gaagtcactg gacatggcac ttcggcacat ggacatacgg cgcagcattc caaacaatct 240
acggcctctt atgacgagca ttccagcatc atctgtgcat atcggccggg ctggctccac 300
aaggggcaga ccgataagtg tctcggactc acctcttgcg actagcagca acgccagctc 360
cgatccgagc gtcaacaaca acctgatgtg ctttgacagc atcgacattg acgacg 416

<210> 2502

<211> 422

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H10

<400> 2502

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agtgggaggg ggacaactcg gcatccaaca cagggttggg agcgagtcag gagcctctga 120
gcagctggaa caaaatcagc accggctggg gtgatgccct ggcgagccc ggttggggca 180
gctcaagcaa caaccattgc tcagggaata actggaacag ttcccatgga gcatccagca 240
acagtaacac atactaccag gatccatgca gcgcatatgg cacgaagagg aacagtggcg 300
gcgggtactc ccagcagagg aacagcaagc acagaagcca ggctgagagc caccaccaga 360

tgggcagatg gcatgatcac cgggacaggg ggacgcatgg tgagcggttt ccgtttgaca 420
at 422

<210> 2503
<211> 387
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H12

<400> 2503

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cgcatgactg ataccctgtc agatgaggca aagcgtggta ttacaatcaa atccacgggc 120
atctctcttt tctatcagat gactcctgaa tctactcgaga tgtacaaggg cgacagggat 180
ggtgatgagt acctgatcaa ccttattgat tcacctggcc acgttgactt ttcttcagaa 240
gtcacagctg ctcttcgtat cactgatggg gccttagttg ttgttgactg tattgagggg 300
gtctgtgtgc agactgaaac tgtgctgcgc caagctcttg gtgagaggat taagcctgtc 360
cttactgtga acaagatgga cagatgc 387

<210> 2504
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H3

<400> 2504

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cgtttagaga atcgtttcca acagtaatga cgcctcggtg aaatccattt tcgactcctc 120
atggcttgac atcattgccg agaaaacttt tctacatcag aagtgaacaa ataattctta 180
gattaaaaca cgaaatacac caaattacaa cttgatttga gtcaccaaag tgatattcat 240
ttcaacacgg atttttcaat ctagacgcga taattatgaa aattggggga atctccaact 300
gtctagagtt acagagaatt ataaaaagaa tccacaggac tgacgaatga aatcccatgc 360
cacaattttg tgctaaagcc atgcagaatc attcagctcg atatcaacgc atcagtcacg 420
aaattcc 427

<210> 2505
<211> 405
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H4

<400> 2505

tggttggttg gtggtctcga attttgatgt aatttttatt atgttcaatt aagatgcctt 60
gtacttttcga tgaacttttg tatataataa tatatttgat cctttcccga cacacatacg 120
tgcggtttta agccatgaaa cattgagtc caaccttaac atgttcttct tacatgagtt 180
tttgtaataa atagcaacga cctcatcatc tgacgaggac tttccttgct cgatctctgc 240
gcagaaacca gaccaacgtg gataatgtac gtctgtaa atacctaagggt tcggacgctg 300
acgttggtgt gggaagatga tagcactgaa tttgctatga tcgtggacaa cgtcagtgcc 360
gagataggga caacaacaag gcggtatggg actttactgt tttct 405

<210> 2506
<211> 321
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-004-Q1-E1-H8

<400> 2506

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agtggctctga gttttagatg gcttatcatc ttcgatctgc acatctggat tttgttctgg 120
acttggttaca ggtctttctc ctactagtta gagactgctg agttgaagcc aatatttcta 180
atctgagcat acggcattca actactgttc ggctggaata agaattgtgat tgctttcctc 240
aacctgtttt gtagcattgt tcatgataga taatgccttg tgaattttct ggcagatcca 300
tgaaatgcct ggatatctct t 321

<210> 2507
<211> 213
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-A1

<400> 2507

cgggcaagga tgatgattcc atcttaggag gccaaacttc gaacaaaata ggtagtacia 60
tcagcagacg cttcaagatg actgactggg agctaaacat ttatatgatt acttgctgta 120
ttgggtctgt tgttgatgg gagtttgtga gggatgttct aaaaacctct gcaccgggaa 180
atccttggcg attaacttat gacctcccat agt 213

<210> 2508

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-A10

<400> 2508

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gattcttgaa gcatgcacta tagtctctcg ttatgctata aagttggagc atgatttatt 120
attgattgtc tttcttatga atggcggtcg gggacgagtg ttggtctttt cctaccaatc 180
tatcccccca ggggcatgca tagtagtact ttgcttcaag ggataataaa cttttgaaat 240
aagtatatga gttctttatg actaatgtga gtccatggat tatacacact cttacctttc 300
tgcaatttgc tagcctctac agtaccgtgc attgcccttt ctcacctcaa gacgtggtgc 360
aaactttgcc ggtgcatacc aaactcgtg atactctatc acaagac 407

<210> 2509

<211> 384

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-A11

<400> 2509

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aagtggtgctg tcaacagttt gatcggaag cggagccag acaaagtgtc tgcgaacat 120
gcataccctt ttgcacaggg caagctcttt gtcctaacca tcacagtcgg cctcgaaagc 180
taccatgtca atgtccatta gcgacatggt acatccttcc cttaacgcac tggttacaac 240
ctogaagacg caacgggcct gtcgttgaac ggggaccttg acatcgactc ggtttctgca 300

gcccattctgc ccaaatacaca ccctagcttc gacccacagc gataacctga aatgtctgaa 360
cagtggaagg cctcgctct gcca 384

<210> 2510
<211> 385
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-A12

<400> 2510

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atgtcaaccg aaccaaacat ttattggggg ctgtatacaa acctggcaaa caactcccaa 120
ggccttgtgg caagcaagta aaggtacaca aggacatcgc tgcgcatgca catctaagcg 180
acgacgacct tgggacgaga cccgacacga gtgccggtgt actcgatgtc gaacccgacc 240
accttgact tctcctcggc aagcaacaac tccatgatgt ggatggagtg ctccaccag 300
accgggttgt tgggtgtacac caccgagagc tccgtgaaca ttctgtgggt gtccaacacg 360
gcatgcattg tgaactgctg ctcat 385

<210> 2511
<211> 407
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-005-Q1-E1-A3

<400> 2511

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tgacatgccg tttctgaaga tcaggcggca tcagcaagca aggagctggc ttaaaaagct 120
ccgtcctgag ggctttgagt aaacggcaca gccccgacga gcacgcggtg agcggcatgc 180
tactgagatt gtccacacgc ttgattaact ctgtggggag cgaatttttag ccaactcttc 240
ggatggatgct gctcggttct gccattgtta gtgcttgggt ttcggacgag ggggggagggc 300
gccttagcgg ggatggaaga ttggacgaga ttatgtgcgg acaaagatgg agaagcaaat 360
atgtgctgag ggaagtggat angtcatgat gactacagca cgccgct 407

<210> 2512
 <211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-005-Q1-E1-A4

 <400> 2512

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 aggaggacaa tgacgaggac gatgaatacg aggacgagga cgacgacgac gacgagtatg 180
 acgggatgga aatggagcct gcggcggttcg catctgggtg aggataacat gaagatgcaa 240
 gtagctgaat ggtctgtttt gcaactgatgc tcaagtgtat gtatgtaatg gatggcaatc 300
 ggtaatcata tgttgccgat gcagaacatt ggctacggca tgactaaata ttgcctcaa 360
 ggtgacctct gaagcttctg ttgctgattc tcggttccca ctatg 405

<210> 2513
 <211> 397
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-005-Q1-E1-A7

 <400> 2513

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 tggttctcct agtgctacct tagccgatat agcggaacgt aaggcaccaa aatatagaag 180
 ccgggcaaac ccaactattg acccaaatca tgattcggag ccgatgcata tagtgctata 240
 agttcggggg gccgcacttg tgaaagtgta cggacttctc acgcatatt aaagggcact 300
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 tatataaaag agattataat gcaaaagata gacaaaa 397

<210> 2514
 <211> 389
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-A9

<400> 2514

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cttattgggc catacgggaa tagaggagag agacccaaaag gaaggaggca tgtgccctcc 120
ctctgggtccg aattggacaa ggggcgcagc ccccttttcc ttcttcctct cccctctttt 180
ccccttctcc tactccaaca aggaaggagg gagtcctacc gggagtagga ctctccttgg 240
tgccccctc ctaggcgggc cgccccctcc ccccttgctc ctttatatac ggggggaggg 300
gggaacctct agacacaaca acaattgatc ccttggatct cttagccgtg tatgggtgcc 360
ccctccaaca tagtccaact caataatat 389

<210> 2515

<211> 443

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-B10

<400> 2515

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gcatgaggta tttattgatt gtcatecttt gtgtggcggc cgggatcgcg cgatgggttaa 120
ctcctaccaa cccttccact tggagcatgc gtagtagcac tttgcttcga gggctaataa 180
atTTTTgcaa taagtatatg agttctttat gactaatgtg agtccatgga ttatacgcac 240
acttaccatt tcgcaatttt ctagcctctt cggtagcgtc cattgccctt tctcaccttg 300
agagttgggtg caaacttcgc cgggtgcatcc aaaccccggtg atatgatacg ctctatcaca 360
cataaacctc cttatatctt cctcaaaaaca gccaccatac ctacctatta tggcatttcc 420
atagccattc cgagatatat tgc 443

<210> 2516

<211> 220

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-B11

<400> 2516

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attgaacatg ctttaagatca atacatctat cacatctgtg atacctgcag ttcaactata 120
gcctcaacga tgttcattta atcctccaca tcaagtccat catgacgcac ttgcgcaagc 180
cgttgcggaa aacatgcaca gtatctaccc caatgagtta 220

<210> 2517
<211> 404
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-005-Q1-E1-B2
<400> 2517

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gttgcatcat attctgatga tacttctggc ccggagagtg gccacagag ccctagccag 120
tccggtgagg actggaggtc tgccttcagt gctgcagcaa atggctctgc cgcccgatcc 180
agttcacaga acgagtcaag atcgagaagt gctgacagtc gtggtcggcg gtatgaaaat 240
ggggatgcca acggtgccaa ttcaggcagc cgacgcacac ccaaccgggt gccacctgca 300
ccaccgaaat actaagcatg ttgattggca tatgtgagaa ttatatTTTT catggaatgc 360
tctcactccc tctgatact gattgggaaa caaattggca tgac 404

<210> 2518
<211> 395
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-005-Q1-E1-B3
<400> 2518

tgtacccatg gaagaggatt cagctgagaa gaacctcgac atctgggggtg gacatgctaa 60
aagggtgct ttgcccaaaa acgggaatga aaatgcttaa gaaaaataaa tctaccacat 120
ctgtgattcc tgcagttgaa cttgagcctc aaggatgttc atttaatcct ccacatgaag 180
cccatcaaga cgctcttgct ctaaccgttg ctgatgaaat gcgcaagatc tacactagag 240
agttaagccc cacaccagtg ccacttactg ttcttgggtca agcagtaact gaagaagata 300
aattttttct tgatgctgct gatgatggag atgctgctgc tggagatgta tatgctgcag 360

aaggtgataa agaccacgat gctgatgctc taact

395

<210> 2519

<211> 418

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-B9

<400> 2519

ggtccacggc acggatatac ttggactcaa gcacgctaca cagttctaca gaactctacc 60

taggtgaccc cgtatgtcga tgaacacaag aacagtctgc gctccaaaca cccggagctg 120

tgcgacgact ggattacatg tgaacacatc aggactttca gcagttgggtt ggaagcacgt 180

cttataggtg acaacatggt tgtgatgagt tgtacttggt gtccagggga ccatcttcga 240

ctgttacgat ttggaaagga aacgagataa atgggaatac attttacacg attgaccaag 300

ataaaaagag caccaaccaa aacagtgggt tcctctttga tgcaacaacc gagaggggaa 360

aggacacata ttatggttac atagtggaca tatgggaact tgactacgga catgattt 418

<210> 2520

<211> 425

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-005-Q1-E1-C1

<400> 2520

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agtgatctcc acaagctgta ggccgatggc gtgctccatc ccctgcgatg gggtgaccat 120

ggcgggtggc acaactcctc atgctcgctt cgatcttggc gacacaccct gagtgtanga 180

ggcagcaacg acctcgacga aatcatggcc tccatccagg aacgcaatca tgctgctcta 240

aataaatgga ttcatcatg tgactctaata tacttcggat tgttatgtgc aactaagcg 300

gggtgcagtt aggaaagaaa atgttctcta attaaagtga ttgagtgatt taaggtaagg 360

ttaattaatt tagatttgat ttttagtgat tgtagtaaaa gtacgatgcg tctttaaaat 420

ctttt 425

<210> 2521
 <211> 386
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-005-Q1-E1-C10

 <400> 2521

 ggtccacggc caagaccaa cgcaatatc agtttgttga ctggtgcccc actggcttca 60
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 agagggctgt gtgcatgatc tcgaactcca ccagtgtcgt cgaggtcttc tcccgcatcg 180
 accacaagtt tgacctgatg tacgccaagc gtgccttcgt ccactggtag gtcggtgagg 240
 gcatggagga gggagagttc tctgaggccc gtgaggatct cgctgccctg gagaaggact 300
 atgaagaagt tgggtgctgag ttcgacgagg gtgaggacgg tgatgagggc gatgagtatt 360
 aagcctgcct cctggtgctt tcccaa 386

<210> 2522
 <211> 307
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-005-Q1-E1-C2

 <400> 2522

 aggtccaggg cttgctgcaa aatgaatcta ataaatgtgg ggcacaggta gtagatcggg 60
 cggctatcac gtccggcatc caacgaccgt taaagtgcg gataaaatca agaaatctgc 120
 cggcggacgc gtatggtcac ccatacaata tgcgttacga gaactatgtc atgatcacat 180
 gcctgcctga actactgttg tgcggacggg aactggctaa agactttcat cactatgcct 240
 gtagatattt gttaatacaa ggtagttca tgacatactc tgcattgact accggaaccc 300
 tacatta 307

<210> 2523
 <211> 401
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-005-Q1-E1-C3

<400> 2523

cggggtccacg cggatgccga agaggactac gaggaggagc tcgagaacca cctccgcgtc 60
caccaccacg agcaccacag cggatggcgag gttgatgggg acgatgatct cgaggctgat 120
ggcgagggcg aggggtgaggg tgagggcgag gatgaaggcg aggatgacgg ttctgaagag 180
agcgagtacg acgaggaggg gtttgatgag gacgaggagg tggaggatgt ggatctagac 240
ccggcagagt acgaggacga cgaggcttat gcacggggcg ttcangacgc tgaggagcgt 300
gaggttgccg cgcggcttat ggctctcgct gggatcagcg attggcgggc ggtggagcat 360
gttgaggatc acataaacga cgcgcaagat tcatggcaag a 401

<210> 2524

<211> 422

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-C4

<400> 2524

gggtccacgg gtatcaatta aaaatccaac ataattttcc ctgcaaaaaa aacaatcgaa 60
tttgaaattt tgaaatgcta aaaaactatt attgaaacta attgtcgggt tgccatgttt 120
ttaaaattta taccattttc ttactactta tagccatttt tctgggcaag cgaatacatc 180
cctctcgtct tgaaagattt acagcttagc agggctgaga aaaggaagta ggcctccatt 240
gggtattctt ttaagaaaat agaactggac tagccatttt caaaagaaaa aacaacaact 300
gggctcatca tgttgtgaat attatataaa agcctgggct atacggacca cagccccgcg 360
aaagccccgt tgataactgc tccacctcta aaactaaata ataactaccc gacctgctga 420
gt 422

<210> 2525

<211> 393

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-C6

<400> 2525

cgggtaagat aagctctatc acacataaac ctccttatat cttcctcaga acagccacca 60

tacctaccta ttatggcatt tccatagcca ttccgagata tattgccatg caactttcca 120
 tcgttccatt tatcattatg acacgcatta cttttgtcat attgccattg catgatcatg 180
 tagttgacat cgtattttgtg gcaaagccac cgtgcataat ttttcataca tgtcactctt 240
 gattcattgc accatcccgg tacaccgccc gaggcattca tatagagtca tatcttgttc 300
 tagtttcgag ttgttattca tgtgttgtaa atcaataaaa gtgtgatgat catcgttatt 360
 agagcattgt ccccagaaag aagagaacgc aag 393

<210> 2526
 <211> 243
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-C7

<400> 2526

gggtcgacgg ggcagactaa atctagccgt cataaacctc cttatatctt cctcagaaca 60
 accaccacac gtacctatta tggcatttct ataaccattc cgagatacat tgccatgcaa 120
 cgtgccatcg ttccatttat cattatgaca cgcaggactt ttgtcatagt gccattgcat 180
 gatcatgtag ctcacatcgt atttgtggca aagccatcgt gcagaatttt tcatacatgt 240
 cac 243

<210> 2527
 <211> 59
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-C9

<400> 2527

ggtcgacggc gtcgtattaa tagaaaatcc ctactcatca cgacatgttt gcaatctgc 59

<210> 2528
 <211> 424
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-D10

<400> 2528

cggtcctaga ttcacgggtc cacgggggag cgagagcctc tctctccatc ccgacctctc 60
 gtggccgccc cgaagaaaag gagcttatca tggcttcaaa acgtatcctg aaggaactga 120
 aggacttgca gaaagatcct ccgacatcat gcagtgcagg tccttctggc gaggatatgt 180
 tccattggca ggcaacaatt atgggtcctc ctgatagtcc ctatgctgga ggtgttttct 240
 tagtgaatat ccatttcccc ccggactacc ccttcaagcc tccgaaggta tcgttcaaga 300
 caaaggtctt ccatccgaac atcaatagca atggaagcat atgcctcgac attctgaagg 360
 agcaatggag tcctgctttg acaatctcta aggttctgct ttcaatctgc tcgctgctta 420
 ccga 424

<210> 2529
 <211> 402
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-D3

<400> 2529

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 gtaaagggtt atactcccc aaccaccaac aagcatcaat ccatggcttg ctcgaaacaa 120
 cgagtgcctc caactaacia catccctaga ggagttttgt ttaattatat tgatttgctt 180
 tgatattttt ggatcatggg actgggcac ccggttaccg gccctttctc atgaatgagg 240
 agcggagtcc actcttcttg agaataaccc acctagcatg gaagatatag gcagccctag 300
 ttgaaacatg agctgctcga gcatacaaaa caaaatttca tttgaagggt tggagtttgg 360
 cacatacaaa tttacttggg acggcaggta aataccgcat at 402

<210> 2530
 <211> 289
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-D9

<400> 2530

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 gctacaagac cgtcctcagg accctcagga actccaaggc aaagcttggt atccttgcta 120

acaactgccc tccgctccgc aagtctgaga ttgagtacta tgctatgttg gccaagatca 180
 ctgtccaaca ctaccaatga aaacaatgtt gatttgggaa ctgcgtgtgg taaatacttc 240
 cgagtctgct gcctgagtat catcgaccct ggcgattccg acatcatca 289

<210> 2531
 <211> 106
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-005-Q1-E1-E4
 <400> 2531

tattcatcat ggggcttaaa taaattttca agatcataag aagaatcacc ccaatcatga 60
 tcattagaac aagtagaagg catagtaaaa atagcatccc aaagct 106

<210> 2532
 <211> 392
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-005-Q1-E1-E9
 <400> 2532

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 agccggaaca gcagtagcag atccggctgg tatggacgct gccgctgaag gggcctcgca 120
 ctangggaga gccgccgtgg ggatgtcgcc cgtggcgctg gcttcggggg accgcgccat 180
 ggggggtgcag gatggagcac cgtcggcgcc gggaggtcaa gttaaggaga aggtgcgatg 240
 cgatgagtgt acaacctctt tgggtggcgct gagtaggcct cgacttcgtc cgaggagtcg 300
 atgaggatgt tgcgatttcg gtggagcagg ttaaggcggt gctgtgggga tggagcagcc 360
 acggtagacg aggcgattgt cgaagcagct cc 392

<210> 2533
 <211> 389
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-005-Q1-E1-F1

<400> 2533

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ctgccgttcc agcgcttggc ccgcgagatc gcgcangact tcaagaccga cctccgcttc 120
cagtcccaacg ccgtgctggc cctccaggag gcngccgagg cgtacctcgt cgggctgttc 180
gaggacacca acctgtgcgc catccacgcc aagcgcgtca ccatcatgcn caaggacatc 240
cagctcgccc gccgcateccg tggcgagagg gcctaagccg tcttccccgt caacgccgtt 300
agtggatcng aagtggaatg tggtgcttcc ggttgtaatt tgttctaata tgccgtgcta 360
ngtctatctt cctttgtgta aaagaaata 389

<210> 2534

<211> 376

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-F10

<400> 2534

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gaacagcttg ctgatccaga gacaacgact gatacagaca ggaacatggc tgctctgttt 120
aatgttctga ggaagaagaa aaaagcaagg ctcgaaaacc ttgttttgaa cagaacgtcc 180
tttgcccaaa cgggtggagaa catatttgcc ttgtcattcc tagttaaaga cggcagagtg 240
gaaatgaatg tgaatgacga tgggcatcat atcctctctc caagaaatgc acctgcagct 300
ggtgcaattg cctcaggaga agtgaaatac aaccattttg tcttcagata tgattttaaa 360
gactggcagc tcatga 376

<210> 2535

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-F11

<400> 2535

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ttgttgcatg aggttctctt ttgattgtct tccttatgag tggtagtcgg ggacgagcga 120

tgggtcttttc ctaccaatct atccctccag gggcatgcat agtagtactt tgcttcgagg 180
 gctaagtaga cttctgcaat aagtatatta gttctttacg actaatgtgg gtccatggat 240
 atacacacac tcatecttcc atttagctag cctctattat tccgcgcaac tttcaccggt 300
 atcatgcacc cattatttac cttcctcaaa acagccacca tacctaccta ttatggcatt 360
 tccatagcca ttccgagata tattgccatg caactttcca ccgttccg 408

<210> 2536
 <211> 134
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-F2

<400> 2536

aggttaatag tattcctgca tgacatgtgt aacagatata tttcaaccaa cacaatcaac 60
 actcattata tcttactatg ccataccgaa cataccggtc acgacggaga ccggcggaaa 120
 gctcacgcct accc 134

<210> 2537
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-F3

<400> 2537

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 gactaatcca cgagcaccta tgggaccggc ggaccgagtc cctttcggtt cggcgggggc 120
 gagggtcgca cgaagagcgg atcgaggcga agcacacgag cagtttacct aggttcgggc 180
 cgcacagatg cgtaaaacct tactcctgct ttgtggtttg tattgagttc ttgctcggga 240
 gcgcggagtg ctacagtaca cccagcagc taacgagacc gagcgtgagt gttctctttt 300
 ttcacttacg ttgcgcatga gcctcctttt atatgcgcaa ggggtcaccc acaggtggca 360
 acgtagacaa gggtaaaaat ggaaaggtgt tgcggttggt acagctacct gctacagtg 419

<210> 2538
 <211> 348
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-F4

<400> 2538

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accccctggt ccggttcggc aatctgattc tgaaactgcg acgtatactc aagcgaattc 120
cgggtgtccg atgtgcaa atgccaattc gctgaacgga aaccggacgt gctgttcctg 180
gaagtcaact acgaaaaaca caagtccatg tgccacaacc tccaagtcca agtcctccct 240
ttcctcaagt tctacaaggg aaccaaggg aaggtcagta acttcaactg cacaaatgca 300
accgtaaacc ttaatgaata agtttcctcc tttgtccaat acaaaaaat 348

<210> 2539

<211> 95

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-F6

<400> 2539

ctggctggcg cgctctccat cgcaaggta gagttcctgg acgaacaccc ctgttcggtt 60
ccggcactct gattctgata ctgctaccta tagtc 95

<210> 2540

<211> 418

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-F8

<400> 2540

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gtaaatccaa cgactaacat gtcagaatca tttgttgact aaattgacaa cacttgcggtt 120
gtctttgacc tattggccca catttcagcc tccaagaatg tggcacgtat tcaaccocatt 180
ttttcagaat ttacagtctt tttttgcgca gtaaaattta cagtcaattt gatctttttt 240
tttgaattac aacaataacc tgggctgggt gaccaattaa ggtaccttca agttaaccaa 300
ttaatttaat tcccaaaaag ttacaaggca attgcaactt aaccaaaaatc acgaatttgc 360

cgaaccgaat ccaattaaaa tgttgggttg ggccaacaat gttatccaaa aattaaaa 418

<210> 2541

<211> 420

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-005-Q1-E1-F9

<400> 2541

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gtcttcataa tcatcatcat tgtcgggggc ggagtcggtg tcgtcgatga tgatgtagtc 120
ttcgggatgg tcgtcacctc ctggcatagg gtctcccatg aatactccta gcttcttctt 180
caggtcttca ttcttctcta gtagtactgc aatttctctt tcatattcat cgcgtgtaga 240
cttgagttcc tcttctagct ccatgttctt ggatcatcacc ttcttttaggt atatcatgct 300
ggcgcacatc tggttctcct gacgacgaat gtgttggttc aactcttgga tgtaggctgc 360
aatggacttg tcnctcctgg tgcaaactcat ctaccatttc tcatcttggc gttcacatat 420

<210> 2542

<211> 424

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-G1

<400> 2542

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ttctcccaag gacatcgtct gtgaagaaga acacctcaga tgttgatgaa tcttacgcag 120
aatttctgag cctcatgaag atcaaggatg gtttcatggt tcttgagctg gaaccaggtg 180
ttactgtggt atatgagcaa gaggaggaga caccctcctg atatgatgaa ttgagaactg 240
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caatctgcac agatgagcat ggagttgtac cttgtactga atcttctgat tttgaggcat 360
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aaaa 424

<210> 2543
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-G10

<400> 2543

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 agttgtggac gaaacaatct gatgctgcag cagaatccga gtcaaactac aagtccaaag 120
 gtgttacatc acctccactt gggccattg acctgtacg acctagattt agtttttaggc 180
 tgccttggga cgtcctccca cctccttggc cgccaccctt tgctcctata taagtagatc 240
 catctagtag cttttccttg ggttttgtt agattaaaag ttcgacatag ctgcaacttc 300
 gcgtacttcg tttgtgttca acgaccagac aaaggcgtca cagaacccca cttgatcaa 360
 taaagctttc atcttatatt cgcaatatcc agattgcaat ctgagtttct tgcgtgttcc 420
 tcgtttg 427

<210> 2544
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-G11

<400> 2544

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 tggcccgggc agtagaggcc gggattagca cccagggat gtctgcgagc ctttcatact 120
 ttgataccta taggtgcaac cggttgccag caaatctgat ccaagcacag agggacttgt 180
 ttggagcaca cacctatgag cgcattgacc gccaggttc tttccacacc gagtggacta 240
 agctggcgag ggagggcaag tgaatgactt tgccgccacc tgaggaattt ggtggtacca 300
 tatgtggtct cggtgactct ggggtgatgt ctcttcgtgg ttgtctttaa tttatctatt 360
 gctgtttttg caatacgaga tctgaattgt gtaccttgaa taatg 405

<210> 2545
 <211> 382
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-005-Q1-E1-G12

<400> 2545

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gaggtgtcca tcagcctggg ggagacgaaa ggcgggaact ggaagagcgg cctcatcgtg 120
catggcatcg agatagacgt aaganatcgg gctgagtgaag gagccctgg gattcgactc 180
gcccgggtcg atgtaaatga attaaggaaa acatatcttc cgtagtgcct tggttttgaa 240
cacttcgcct tttgcggcta aaccatacta tgtgtacacc tatgccaaact aatatgaatg 300
gataaattac ggtttaacaa aatttccttc gggcaattta aaatccttgt gtcttgtgtc 360
taaaagaaaa acagcggact cc 382

<210> 2546
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-G2

<400> 2546

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agcacaacgt gcgtgactgg cttcgggtga tttcatccaa caaggaccgc agcgtctacg 120
aactccggtg cttcaacatt gctgaaaacg aagggcaaga agaagaacaa atgttcaacg 180
gcctggttcc gttccgtttt aaactttgaa cttggtgggg caattccgca ataaaatttt 240
gaagttaag ttttcaaccc tggtttgaat tgtgggcaag aagccatgtt atggatgcct 300
aaataaccaa actgaagaat tgtccgttcc tggctctggg gtttaaaaaa atgttggtga 360
aaatatgttg ggcgtaaaaa aaaagttacc gaaataa 397

<210> 2547
<211> 375
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-005-Q1-E1-G3

<400> 2547

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 gtgttgaagt tattgggagg gggtaatatc aacaacgaca acatacatc acgggaaaat 120
 aatgttaccg gggaggggggt atatcgaccc cccccccacg tggttgaagtt atcacgatgg 180
 gggtatatcg acaacgacga catatataca cgggaaaata atgttatcgg ggagggggta 240
 tatcgacccc cctcgtgttg aagttatccc cctcgtgtt gaaattatcg ggacgggtat 300
 atatcgacga ccatagaccc gataaaacat aataaaacga ataagaaata taaagatgag 360
 agaagaagaa aggaa 375

<210> 2548
 <211> 384
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-005-Q1-E1-G4
 <400> 2548

ggtggctagt agaatcatcc ttgatctata tttttgggtt ggtagtcaa agagcacgtg 60
 attaaattag aggaagtaca tgttactttg ttgtttaccc tggatgtgtt cctacgaaca 120
 tgcatatgca tcaaaacaat ccaattcatc aagaataatt gatccaaagc agttaattca 180
 caaaatcctt ggacaacctt ccaaataagt ttcaacaatc caatttccaa cctcaatttt 240
 aaaaaagggc caaccaacaa accaatccat ttatccggca aatttggtcc aaccgaacat 300
 tgataaattg catgttaaaa tttgggtccc aaaaatttcc cgggtaagtc aaaggcacia 360
 aggaacaatt ttttccaacc caat 384

<210> 2549
 <211> 325
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-005-Q1-E1-G6
 <400> 2549

ccgggtcgac ggctaacgct acacctgtta gtcacatccg ctcatgaagt tgagttgaag 60
 atgaacctct atctcaaaga cgccagtagt agctactacg tcggcgctat tgcatattct 120
 gcaaaaatgt atctcggcta ccaatttggtt ggaacgactc atttagctat tttcgacaaa 180

tgaattggat aaaataagaa catctatggt gtggctgtgc agtaacgtgc ttatgttgaa 240
 tacagtcaat attccgttcg aaaaaagaaa aaagagtaaa ccgcataaaa gaagcaggaa 300
 aaaaaaaaga agaagagttt ttttt 325

<210> 2550
 <211> 399
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-G9

<400> 2550

cgggtccacg gcaagccata agtatctgta ccgaacggtg tcagtggaga gaaacagcag 60
 gatgctgtca atgggaagcc aaagtcgcct gtagcgaatg gtgttaacgg ggatgcgaag 120
 gttccggcag agaaagccgc tgccaccgct gctcctccag ccgttaccta cgcggcgaag 180
 gtggcccaaa cagcagcggc cgagaagaag cctgcggcga ccgagaagaa gcctgtcgtt 240
 gccaacggtg ctgtcaagac cgggtgtagct gcttgatcgc ataccgatc ctcccagcta 300
 gccatgaaga acaaacggac ggtgctggcg aaccaggcga gacatgcggg gtcccaaggt 360
 actgatcacc aaaggtggct gctggaaagc gggtcggat 399

<210> 2551
 <211> 411
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-H1

<400> 2551

gggtccacgg gattagctat cccctcttta ttctggcatt ctgcagttca gtccaccgat 60
 atgggccttt acacatatac ccatgcatat gtagtgtagc tccttgcttg cgagtacttt 120
 ggatgagtac tcacggttgc ttttctccct ctttttcccc tttcccttct acctggttgt 180
 cgcaaccaga tgctggagtc caggagccag acgccaccgt cgatgccgac tactacaccg 240
 gaggtgccta ctactacgtg cagcccgtg acgacgacca ggagtagttt aggaggatcc 300
 caggcaggag gcctgcgcct ctttcgatct gtatcccagt ttgtgctagc cttcttaagg 360
 caaacttggt taacttatgt ctgtactcag atattgttgc cttcgctgac t 411

<210> 2552
 <211> 373
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-005-Q1-E1-H10

 <400> 2552

ttctcaatag cgaatcttat cactggcact gtaacctcat atcagtagat atttcggatg 60
 gtgagcaaac aattcagtgc tatgttcaag atgaaggctt tcttgcatg gtacactgg 120
 gaacgcatgg attacatcga attcatcgat gcggagatca acatgaatga cctcgcttctt 180
 cgactaccat cagtagcaga ctctactgct gactacgacg gcgagtacga tgatgaggat 240
 taggaccctg atgacgacat gtaaagtggg atgtccatgt catgctttgc taggctgggg 300
 ttctgggggc atattttgat ctgtttgggtg ctttgttata aatctgttta tcatcgcaac 360
 tatcgcttgt aca 373

<210> 2553
 <211> 391
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-005-Q1-E1-H11

 <400> 2553

ggtcgacgac gatgaataac ccgaagagga gctaggaact gaatatctgg tgcagccgct 60
 tggccgtgct gaagacgaag agcattccag tgacttcgag ccagaagaaa atgggtgatgg 120
 tgctgaggac gaggagattg aggatgacga tgctgaggat ggtgaggatc ctgtcaaggc 180
 gcaatcctca tcaaagaaga agaggtctgg tggggaggat gaagatgatg acgacgggtga 240
 tgatgatggg gatgatgatg agaagcctcc atcaaagcga tagtcaattt gttcgtgctg 300
 atctgtgatc ttctctgctt gggccaagaa ggaaaataat cctcatggag aggattgttg 360
 gtaaagtctg tagctttagg acatctgtgg t 391

<210> 2554
 <211> 378
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-H12

<400> 2554

gaaagcggcg gagggccggg acggcaagtc cgggcgcgcg ctggagctgt gggccaacca 60
gccggccatg cagctctaca ccggcaactt tctgaaccac acccagggga agggcggcaa 120
gctgtacgag cagtacggcg ggttctgcct cgagacgcag gcgtaccgag acgccgtgaa 180
ccaccccgag ttcccgtcgg tgacggtgag gcccgccag gtgtacaaac acgacatgcg 240
cttcacgttc tccttctagc taggctggac tatggctgct acggtagtag tagtgctacc 300
attggttaat ggatcgact agatgtgttc actctggatt tggaggtggc gcgattcgtg 360
gggctgggta ctgttatg 378

<210> 2555

<211> 70

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-H2

<400> 2555

gggtcgacgg ccactocaga cacaaaaagg aattgcggcc ttgaggagca atgttgatac 60
acggatcgta 70

<210> 2556

<211> 181

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-005-Q1-E1-H4

<400> 2556

ggctctacgga gaagcctcat catgcatggt cttcgaagaa gggtcatact cacggccagg 60
tgtatgggta taggaactcc ctctgggcag aacaccttgg tatggttgat gaccattca 120
aggaaccttc tagcctggac tgtgtaagat taggtgaaca gatacccgaa gaaaactggg 180
a 181

<210> 2557

<211> 375

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-005-Q1-E1-H8
 <400> 2557

cggggatgcc ctagtgaaac aacatgctaa agttgctgaa gaagctgtat caggttggga 60
 gaaagctgaa gcgaggcct cggcactgaa ggttcagcta gaaactgtta cattgtctaa 120
 gctagcagct gaggaagag ctgcccattt ggatggtgct ctaaaggaat gcatgaagca 180
 agtaagaact gtgaaggaag aaggcgagca gaagctacat gatgtagttt ttgcgaaaac 240
 caaacagtgg gagaagataa aggccgagtt ggaagaaaag ttgccttgaa tttgacatga 300
 gctcataagg gctggtgctg agaatgatgc actctcaaga tcactccaag agcgggcaga 360
 tttgttgatg aaaat 375

<210> 2558
 <211> 440
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-A12
 <400> 2558

gcggttcgat gggaatcgcg aaattgagtc atcatatgat gtggacattg gagccaatcc 60
 ctctgctgag ggtggtggtg atgatgaggg tgtcgatgac catgccgtga aggtggttga 120
 cattgttgac acctccgctc ttcaggagca acctgctttt gacaagaagc agtttatctc 180
 tcacatgaag cgctacatca agaacctctc tgccaagctt gaaggggatg acctacatgt 240
 tttcaagaag aatgttgagt ctgccacaaa gtatcttctt agcaagctca aggaccttca 300
 gttctttggt ggcgagagca tgcattgatga tggcggcgtg gtgttcgcct actacaagga 360
 gggagctgct gatccaactt tctgtactt tgcacatggg ctgaaagagg tcaagtgcta 420
 atcgactgt atgctaaaat 440

<210> 2559
 <211> 425
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-A2

<400> 2559

cggtgccaca gcagccggac aatcgatgcg atcaaatgca aagatggaat tgccttggt 60
gtggagaagc tgataacatc aaagatgata cttgctgggt cgaaccggag acttcattcc 120
gtgcaccgga actctggctt ggctgtggct gggtagcag cagacggtag gcagatagtc 180
tcaagagcaa agtcagaagc agccaactat gaaaaggat acggagaacc catgcctgta 240
aaggaattag ctgatcgtgt tgctagctat gttcatctgt gtacactcta ccggtggctc 300
aggccttttg gctgtggagt tattcttggg ggctatgata cggatgggcc acagctctac 360
atgatcgaac cttcaggcct ctctataaa tttttggtg ctgctctggg taaaggaaga 420
caagc 425

<210> 2560

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-A3

<400> 2560

cgggaaattg aaagcataaa tgcagaatgg aattgtctat gtgtggataa ctgatacatc 60
taagatgata cctgctgggt cgaagcggaa acttcattcc gtgcaccgga actctggctt 120
ggctgtggct gggtagcag cagacggtag gcatatagtc tcaagagcat agtcagaagc 180
agcaactatg acaaggata ccgataaccc atgcctgtaa atgaattatc tgatcgtgtt 240
gctagctatg ttcattctgtg tacactctac cgggtggctca cgccttttgg ctgtggagtt 300
attcttggac gctatgatag ggatgggcca cagctctaca tgatcgaacc ttcaggcctc 360
tcctataaat attttgggtg tgctctgggt aaaggaagac aatctgcaaa aacggacatt 420
gac 423

<210> 2561

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-A4

<400> 2561

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 ttacattcaa gaaaaagtaa aagataacaa atctaaaaca aacaacaaca aaatttgcac 120
 acaattttga gacaagttgc acttttttaa tatggaagaa taagcatata atagtgtaat 180
 tttcaaaaag aagaagcttt ttagtaagga atgaattagt ggcatttgta ttttccttaa 240
 agaataaata aaatgaaata aaaaataaaa ctaaataaaa taaatcaagt ttctaaagaa 300
 aatgaattag taacattggg attgcccttt aagaagacat gaatatgaca aaatttacac 360
 ataaattgca ctttttataa tatgtaaaat aaatgtataa tagtgaatat ttcgtgaaaa 420
 tgaacttt 428

<210> 2562
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-006-Q1-E1-A5
 <400> 2562

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 agaatgtcgg aggagcattg acgaggccaa aagacatgac agtgatttcg tatgaaccat 120
 agcttgtcct gaaagccgtc ttgggaatat cttgctcacg aattcgaatc tgatgataac 180
 ccatatggag atcaagcttg gagaatactt gggcaccttt gagttgttcg aactcctcat 240
 tgatgttggg aagtgggtat ttgttcttga tggctcttct gttcaatgga cggtaatcaa 300
 cacaaagtcg gtccgttcca tcttcttctt tcacaaaaag aacaccacaa cccacggag 360
 aagaactagg tcggatgaga cccattttct cttgaatatc gagttgcatc ttcagattct 420
 tcaactct 428

<210> 2563
 <211> 444
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-A7
 <400> 2563

cccgggtcga cggggaggcc caattgttat agtttccttt tcatcaaggc tatccattct 60
 tccgtgagga aactgtaaga cttattctac aagttgttcc tgatgagtcc ttcgcgtatc 120
 gaaagtctga catttgcttg aagacaatgt caatgctatc tcgaagcatg tctgtggtaa 180
 tccaattttc aataagtga tttgaagcac aatgctaaat tttcttttagc atttataccta 240
 acaccgttgt atgggtaata tcatgagatt cctccccctt tacctaaatg attttctact 300
 ttctatcctg tcatggatat catgatccgc ttgtccttgg aaaggatata cccctgaaat 360
 atgtgtttaa acacattttc ctttcctgtt ttctgtttaa ccttcttgag gtttatatga 420
 tctaagcagt aatacgtcac tact 444

<210> 2564
 <211> 362
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-A8
 <400> 2564

gggtcgacgg gagtgaggaa gccggctgga ggtacacgta cgggagagaa gcgacggagt 60
 taggagttgt aaatatgcat tgttgtatcg cgacctgaat gaatggaata aacgaaataa 120
 cgctgtttgtt caaaaaaaaa aaaaaaaaaa aaaaaaaca aaaaaaaca aaataaaaaa 180
 caaaataaaa aaaaaataaa atgttgaaca aaaggataaa ttttcatgat cacttacacc 240
 aaacacaata gtacgactac aatcacaaca aacatcacc catagcta atcgatttaca 300
 cttcctaacc gggaaaagat agtagtatcc acctgactct ccaaacgaca caccctgaa 360
 ac 362

<210> 2565
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-B1
 <400> 2565

ggtcgacggc gatggataac tcaaatactg cggctactcc agcatggtgg tgggtgcacga 60
 gcgcttcgtg gtccgggtcc cggacgccat gccgctggac aagggcgctg ccttgctgtg 120

cgccggcatc accgtgtaca ccccatgaa gtaccacggg ctgaacgctc ccgggatgca 180
 cctcggcgtg ctgggcctgg gcgggctcgg tcacgtcgcc gtcaagttcg gcaaggcctt 240
 cgggatgaag gtgacggtga tcagctcatc accggggaag aagcacgagg ccctcgagag 300
 gctaggcgcc gacggcttcg ttgtcagcaa gaacgccgac tagatgaatg ctgcgatgag 360
 caccatggat ggcatcataa acacggtgtc tgcaaacatc cccatggccc ctctcttcgg 420
 gctactcaag ccca 434

<210> 2566
 <211> 444
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-006-Q1-E1-B2

<400> 2566

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 agatctcttc tgatctgtag ctgtcctctt gattgtctca acaatcaagc tcatcacttt 120
 gaacttttga gggacatcaa atatatgtaa caagttgatg gagtgtcctg ttatcattct 180
 gtgatctcct gatttcggga aaagtgtgtg cctcagaatg gtattggtag tagacagccc 240
 tgccagcaaa tgcttcacag agccaaactt gtgagtctca agatcttcat ctggaatctc 300
 tttgtacatg ttgtccatag agttgtgatc cttcttcatc tttgcataga catctaggtc 360
 atcctcatga gtttctggag cattgatcaa tttggcncac tcatcaactg tggattggta 420
 ccttgtaccc tcagacatcc atac 444

<210> 2567
 <211> 326
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-B3

<400> 2567

ttcacgggtc cacggcggat cccaatcga tagacaattc ccctaataga gtcccactgc 60
 ccacgaacgt tcacgtctac gtcggctaac gacatgtcac atggcagggtg atgtatcgac 120
 tatgtgcaat catctggtgg atcgatcagc actgccaatc gtgccttgtc cggattgcag 180

catgaacgtc tatacgatac attgctacgt gtgcgtacat cccacgtcag cgttcctcca 240
aatgcccgcac tcacatcact tcagcgggcg tattctaatt cgatcgggtac tagcaaagcc 300
atgtcgcgcga tcacgccaat cgccat 326

<210> 2568
<211> 418
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-006-Q1-E1-B4

<400> 2568

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aaagtcatgg tttnaaaacc cactaacgac caacataccc actaacattt atgtctacat 120
ggttcanaaaa tccccactca tcgaagaaaa aacatttcct gcattatgca agcataaaaa 180
acaaaatgca tacataaata aatccacaaa tagagatttg gcataaaaga ggggaaaaca 240
gaagaaaaaa atgcaactga agaaccccgga gggacaaaaga cccctccctt gagacaagta 300
ctccgtggta gatatgggtgt ctacatggca attgaaaagt tcaacaaaaa caatgaaaaa 360
tgcctctcac aaccagcaca tcacgcatca ataccgaaca cgagaaaaan aannanac 418

<210> 2569
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-B7

<400> 2569

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cgttctccta ccggtgaaat ttgaaacttc ccttgagaga tgctaaagta ctatttattt 120
gaccggcttg gtgtacattg acctttaccg cctgaatgtt atgaattata ttcgtgggtg 180
atgatatgaa tgtcggggag gtgatggaga agtatgacga ggaacttggtg aaggctgagg 240
gcatggagaa gaatgggaga atctaagtgg gaggctgaca ttggcgaagg agaaggctat 300
atgagtgttg gcattggcag acaacgggtc attgcagatg gcattcactg aattattcaa 360

ggaattgaat ctcccaaat gatcagataa ataagatagc aatgagacat agaatgtcgt 420
gttattaatt 430

<210> 2570
<211> 442
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-C1

<400> 2570

gggtcgacgg ctctatacta cttgcattag agtagtgtag catgttacta ctttccgtta 60
atactattct gctgcatagc ctgtctttgc cactactgtt gttaccttac ctgctatcct 120
aatgcttagt ataggatgct agtgttccat cagaggccct acacacttgt ccgtctgccca 180
tgctatacta ctgggccatg atcacttcgg gaggtgatca cgggcatatg ctatatactt 240
tatactgtta cattactatg atactgttcg gagatggggg ctgaaggggc aggtggctcc 300
atccccgtag aggtgggcct gggttaccga tgggtcccca ctgttacttt gtgggtggagc 360
gacatggcag gttgagacca cctacgagag aggtgggcct ggccctgggc ggcgttcgcg 420
gataactaac acatttaacg ag 442

<210> 2571
<211> 346
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-C10

<400> 2571

tcgcgggtcg acgggagggc ctgaagtga tcatagcaag atcggctgtg gaattatttg 60
gcggtctgtc tttagtttcc tttgcgaatc tttccctggg taagtttacc ccagtgagtg 120
tgtgtccttg cgagactatt tcggctctct cccaagtctc tgcgtcttgg tagcttctca 180
tgggctccat ggtgttggtat gatgtggagg gaggaggggtg cgtgttagct aagttagtc 240
actccctctg ttcgtgtttt gtaagttaat tagtagtatg tactactagt atatggaact 300
tccaatcggg tcaaaaagaa aaaaaaaaaa aaaaaataaa tgaaaa 346

<210> 2572

<211> 411
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-C3

<400> 2572

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ctggttcacc tgcgcgaggc catcatcgac ccctactaca gagacatgaa ggattcatgc 120
aacaaggaca agcgtgcctg gcacttggcc tgtatggaga aactcgacaa agctcacgtc 180
gtgtacgcag ccaatgagga gtacacgagc tacgacatgt acaagcggat cgttgacatg 240
aggaagtgcc tccttcccca aaacatccag ggatccagcc cgaagcagag caatggcaag 300
cgatcatcaca acaataacta gatgattaga tcctcgcttc tcctacttta gtatgcatgt 360
acatgcttac tttggtgtgt ggaaatacta cgtatgtagt cacttatgta a 411

<210> 2573
<211> 441
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-C4

<400> 2573

gggtcgacat cctggtacaa acttaactgc cgggctactc tttccgcttc ttcttgctct 60
tcgggaagtt ctctgtctg aaggaaacgt acaatctgct gtgcccttgc tggagcttgc 120
ggctcgacaa caacgactaa aggcacatct gccgctgcgg gaacatccgc ttctacgtct 180
agaacctgcg gtcagccgg agcttgatgt tccccggcaa gttgcctga gcaaaacttg 240
tcgggaacgt ctgcttccac ggaacaaagc ctaaggcttg ccggatcata ctgctcctca 300
gcacccttgg tgttgatcat gatgaccttc ttggctgcgg cttcggggag ctctgccgga 360
aaatagtcac cataaatcaa ctctctcttc atgctctgtc cagttgatgg cattatagac 420
ggttgagtca gcttgagcac a 441

<210> 2574
<211> 351
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-C9

<400> 2574

gggtcgacgg gaaaccggag catcagtcac atacgaagca tattgagctc gatattcact 60
tcctgcacga tcatgttgct cctggccgtg ttcgggttct ccacgtgctg acgtcgcaac 120
agtttgccga tgtgatgact accggattgc ctagctctgt ctacgaggag tttcgggtcta 180
gtctcagtgt ctctggtgac gcatccactg caatgggtgt ttagtatgta tattgtgttg 240
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<210> 2575

<211> 204

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-D2

<400> 2575

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aggagtatgt cggtgtagat atggatgtct gctgtgtcca tatcgttttg caagacttgt 120
tgtggtgctc aaatgttgag tgacaactgt gagacgcttt agtccatcga ggatctgtgt 180
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<210> 2576

<211> 441

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-D3

<400> 2576

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gataagggtt ttgcattggt ttatactaac ttatctcacg agtccttggt gagttttgtg 120
tgatgaagc ttttgagatt tagggagacc gtgatatgag aggaattaag gagacacaaa 180
atctcaagct tgtggattcc caaggcatcc caagataata tttcaagaag tctcaagcgt 240
ctaagcttgg ggatgccccg gttggcacc cacccttctt cttcaacaac tatcggttag 300

tattggttga tcctaatttt ttgcttcttc acatgatgtt tgctattctt agatgtcatt 360
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 agtcttcacg tagctaaata a 441

<210> 2577
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-D4
 <400> 2577

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 tgttgtagc ccagagctgc gtgtgggcct ccgtcgagcc acacagggca aggagcgtcg 180
 ccgccacagc gacgaccgct agagctgctg acctcggcgc catgtctggc ttatgatcgt 240
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 ataatgtcaa tacgtctcga cccatttcaa tttcaagtac tccttgcgct tgtgtacttg 360
 cacgcagtgt gtactacgta ctacgtactg ctctgtactg cgagatagga gaatgtcaac 420
 ggctatctag ttgacatata t 441

<210> 2578
 <211> 414
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-D7
 <400> 2578

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 catgtttgct gggtgctcca caatgttttt acttactgtt atttcgctgt ctcttattgg 180
 tgatgtactg atgtactgta atgaatcatg gtattgcttc tgaataaaac accaatataa 240
 aaagtcaaaa ataatgatg atggaatcac aaatcaaaaa aaaaaaatca ctctacaaca 300
 aaacatcaaa agagtgcagt attttgtttt aacaggtaaa atgtatgcgt gtaatatgct 360

gcctcataat atgttatgtc gttactatcc cttacttggt gctattacca cctc 414

<210> 2579
 <211> 391
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-D8

<400> 2579

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 tgctgaggat gaggagattg aggatgatga tgctgaggat ggtgaggatt ctgtcaagcc 180
 gcaatcctca tcgaagagga agaggtctgg tggggaggat gaagatgatg atgacggtga 240
 tgatgatggt gatgatgatg agaagcctcc atcaaagcga tagtcaattt gttcttgctg 300
 atctggtatc ctttctgctt gggccaagaa ggaaaataat cctctgggag aggattgttg 360
 gtaaattgctg tagcgttagg acatctgtgg t 391

<210> 2580
 <211> 410
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-E10

<400> 2580

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 tgctggtgca ggccgtcgag ctctctgggc caagatgaca tgatcaccaa gcgcccacag 180
 actgagaaca ccaagcagca gtccttgtag agcatgataa tcctatgtag atttggaat 240
 aatccaatac tgacgtaaag tatacatagt gatgtatgta tcttacatga agtgtacaca 300
 ggagagtgcc gcaactccct ggaatggtat tgaactatta atattacaga tttctagctg 360
 aaacaataag actagttgta acttgtaata aaatccggtg gcgagatagc 410

<210> 2581
 <211> 427
 <212> DNA

<223> Clone ID: LIB103-006-Q1-E1-E4

<400> 2583

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cttatattat atgttgctat tacatcacca ttattaactg agggaggaat tgattagtgc 120
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<210> 2584

<211> 406

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-006-Q1-E1-F1

<400> 2584

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ggttgtcaag gcaggcgcac agtcctccgc gctcgagaaa cactcgatat ttccctttaa 180
cgagatgatg cctcgtggac tgggcatttt aagcgtaagg gatacataat gcggtattgc 240
gttaaagcgg gcgaaagctt cgcgtcncag tagttcttga tagctatttg taaatggggc 300
gatgtgaaag gttagctttt cgtggcggaa tttgtcgggg aagccgaaca caacttctag 360
cagccaaaaa aaaaattgag acagaacaaa aaaaagcggc cgctct 406

<210> 2585

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-F10

<400> 2585

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aacagcatga aacaaacata tatctatgta gtatcgtcac tgtatgggtct atatcattct 120
agtttatgtt gccaaatcaa gatagagaca gttcaaatca tatctattta agataaagca 180
gcatagaccg aatataagtg tcggaaacta gacaacaata acaacacttg taatgtgcat 240
ggcatgagaa cataactgtt tcttcaattg aaactaaaat caacatagag aaagttacaa 300

tgaactaaca tgttaaagaa ataggtttca aaacatagct gttgcgccat tggagtttca 360
attgcatcct tcaaattaga aattagttgg tatgagtaaa tatagtgagc aaga 414

<210> 2586
<211> 420
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-F11

<400> 2586

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ggctagccgc atctgctgcc aagctccagc cccgcgcttt ctgctagctc gtcgagttga 120
agattgtcca agagcatttt gaaggttgac agtaaccttc ggttgtcgga agatgtatcg 180
cgccaagaga gctgcattgt caccaaaggt gaagcgccgt gtcggcaagt atgagctcgg 240
ccgcaccatc ggggaagggga cctttgcaaa ggtcaggttc gcaaagaaca ctgaaacat 300
ggagcctgtt gctatcaaaa tcctcgacaa ggagaagggt cagaagctca gattgggtga 360
acagattagg cgcgaaattt gtactatgaa gttaataaag catcctaatag ttgttcgact 420

<210> 2587
<211> 433
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-F12

<400> 2587

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tctgggagag tccgaacatc cttctggcca atcaacagcc accacgtacc cctctctccg 120
ctggggatgc gttgttattt gggtttggcg gaaggccgcc gctgggatgc attgttattt 180
gggtttggcg gaagatgatt agcatgcttg gctatggcgg ataacatgtc tgaagttcgc 240
ggaagccaca aatcactttg tttcacttta ttttcttcat atgctacaag atttgacgaa 300
agtaggctac ttggctacta gatttggcgg aagctacgct agaagcacca agattagtag 360
cttctgcca aacaaaaatc gactactaat taatcacgta gtttctttaa gggcatcatg 420
taattggggg gat 433

<210> 2588
 <211> 424
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-006-Q1-E1-F2

<400> 2588

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 gagagaggaa gccatctagc tactaactac ggacccgaag gtctacaaaa tactactcac 120
 acatcatcgg agaggcacca atgaggatga tgaacccctc tatgatgggtg tctagattgg 180
 atctggtggtt tctggaaatg atataaaaca tccaagaatg ataataaac aacatggaag 240
 aatcaaaatt atagatatgt tggagacgta tcagcatccg caagcttaat tcttgctcat 300
 cctcgagtan gtaaatagata aaaacagaat ttttgatgtg gaatgctgcc taacatgttc 360
 atcacatatt ctttatttta tagcatggac atttggactt ttatatgggtt cagagcaata 420
 gtct 424

<210> 2589
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-F3

<400> 2589

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 agccaccata cctacctatc atggcatttc catagccatt ccgagatata tttccatgca 120
 acttccatca tcatcatata catgagttga gcatcattgt cgtattgctt tgcatgatcg 180
 taagatagct agcatgatgt tttcatgggt tgtccatttt ttgatgtcat tgctacgcca 240
 gatcattgca catcccggta caccgcggga ggcatcata tggagtcata tctttgttct 300
 agtatcgagt tgtaagtaaa taattttgtg atgatcatca ttattagagc attgccccag 360
 tgagaaaagg atgatggaga ctatgattcc cccacaagtc gggatgagac tccg 414

<210> 2590

<211> 400
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-006-Q1-E1-F5

 <400> 2590

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 cagggttgctc ggtgagattt tacagttttt cgtagtttag atcgagtcta ttcttcatac 120
 ctacagtcca cgagaaagcc aaaaaaaaaa ttagggtttag ttcatcatat ccgaaccaat 180
 ctgagccttt gcataatctt tttagggttt tgctttgttg aatttgcggt tgcacgctcg 240
 tgtctagttg ctgggtcttag agtctagtct tttagagttt cgagttctgg tcataagttg 300
 tcacgccacc gccgcacat catcatcgcc cctgccatct accaccaccg cttatccatc 360
 accgctccga atccgtatcc atataccacc accaatccgt 400

<210> 2591
 <211> 401
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-006-Q1-E1-G10

 <400> 2591

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 gtgctgaact tgctcgatta aaaaatgtgg gtgagctgta atctccgtta cgtacccaaa 120
 gtaagcaatg tcatggatga cactgtaac caaggaaatt cacaccaaga ttcttgacat 180
 tcagactcat cacacatggg ttgggctatc agaaccactt gagatgttca catatcgtat 240
 atcgctctga acaacggacc gtgtctgagg atacattgcg cgccaacttt ttcgatgaag 300
 caattccaag ttttccgcat ctgaggcaat atctatctca ctgcctctct ccttagcata 360
 agccacattt cccctgttta cgccttcctt tgcaagttga a 401

<210> 2592
 <211> 438
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-006-Q1-E1-G3

<400> 2592

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tcgtacatgt actgctacta cttgtagccg ttccctgatt tccttctctc ttgcctaggg 120
attgggcggc tgaggccggc ttgtaatcag atagatagat gcgtgggtgg ttgggaggaa 180
ctcatctttg aattcaaata gtaactaatt tccaagaaac cttagttcat gtgagccaca 240
accagagagt agctcacacc ggcccttgta aataaaatat actatggtga tcaccttgta 300
ctaaactccc aagctcagga tacgtgtgga tgacaacacg aatgggatgt ggaataggat 360
aaggcacgcg aagtcgtcca tgcattgcca cgaaggcacg catcgcatcg ctaaaggcct 420
ggttgcgcat cccatggt 438

<210> 2593

<211> 414

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-G4

<400> 2593

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tatatagttt ttgctgtagt gttcactta tatattttag agcacgggtg tggatttatt 120
ttatagaaat tattgttctc tcaagcttca cttatattat tttgagagtc ctacaaaata 180
gcatggtaat tttcttaaata agtgaaatta gtcctaataat gataggcatc caagattagt 240
aaaaactttc ttataagtgc gttgaatact aggagaagtt tgataactga taattgtttt 300
gagatatgaa gatggtgata ttagagtcac gctaatttag tagttgtgaa tttgagaaat 360
acttgtgtta aagtttgtga ttcacgtagc atgcacgtat ggtgaaccgc tatg 414

<210> 2594

<211> 383

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-G5

<400> 2594

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atagcccctc agccatcttg ttcgtcacac atcgttgaca ctggacgact accataccct 120
 caacagttat attgatgact tgtgactaga attgtaatgg taagtgtat gatcaagttg 180
 ataatgtatg atgacaacca aacatcaagt agtcgcattg taatgacatc cactgacctt 240
 ctgtactaca aggttcaacc cagtctcgtg caagggaatg ggggagcccg gcgacgggcc 300
 accgactccg tcactcttttg taatgaatat cccgtgaagg aaccccgctgc caggccccaa 360
 gttcacctca cacgtcgggt agc 383

<210> 2595
 <211> 321
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-006-Q1-E1-H11
 <400> 2595

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 aatgcccattg gccattttct gaacatgtta tggattagta aggcttgaag gtttcatgga 120
 ttctaagggtg caattgaacg tttatccttg tgcacacttc cagagatgcc aaatgcacta 180
 cttattcttc cacacatcat caacttatac tgctgaatgc atcatttctg aaagatcaac 240
 tocaatcaac acacaagcta ttcacatcat cttgagcctc aataagacgt cagaaatata 300
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<210> 2596
 <211> 383
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-006-Q1-E1-H12
 <400> 2596

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 taaacccgaa taaaataatt gcagcgcggg ggaggtggcg tgctccgttg gtgttggttg 120
 cctccatgac accattgttc aagtctctaa gccagcctag aatgttcttg acatggaaac 180
 aaagaccctg tcgtcgcgag atcgacaggc ggggcgcggg aggacaacat cttgcggtgt 240
 tcgcgagtag tggctgatgg cggcaccca cgacactgag agggctgcac gcacggggcac 300

ggccgcggtg ggtgcaggca aacacacggg gactagtgtc gcggtgggtg cagtggtcag 360
gacggacaca ngcgggggca ctg 383

<210> 2597
<211> 440
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-H2

<400> 2597

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agctacgtca tgatatcgcc caacacagag gtgccgcaca cccattgtgc ttcacagacg 120
agataatgga tcatcaaate cccgaggggt tcaaaccctg aaacatctta tcatatgatg 180
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gcgatgattt ccacgccatc aaatacctcc cactcaagct taaaagacca gcccgacagt 300
ggcttaacag cctgctaaca gggtaaatca gctgttggga ggacctggaa gccgcattcc 360
tcgacaattt ccagggcact tatgtgcgac cccagacgc tgatgaccta agccacgtaa 420
ttcagcagcc agaccaatca 440

<210> 2598
<211> 406
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-006-Q1-E1-H6

<400> 2598

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ccagtcaggt gaggactgga ggtctgcctt cagtgtgca gcaaatggct ctgccgaccg 180
atccagttca cagaacgagt cgagatcgag aagtgtgac agtcgtggtc ggccggtatga 240
aatggggat gccaacggtg ccaattcagg cagccgacgc acaccaaacc ggttgccacc 300
tgcaccgccg aaatactaag catgttgatt ggcatatgtg agaatcatat ttttcatggc 360
atgctctcac tccacactga tagtgatggg aaaacaaatt ggaatg 406

<210> 2599
 <211> 385
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-006-Q1-E1-H8

 <400> 2599

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 cccatagcga ccgctacatt ggcctcaagc aaagctggcg caggccaaag ggtattgatt 180
 cccgtgtcag gagaaagttc aagggatgca ccttgatgcc caacattggc tacggttctg 240
 acaagaagac caggcactac ctcccaaca agttcaagaa gtttgttgtc cacaatgtgt 300
 ctgagctgga gctgcttatg atgcacaaca ggacctactg tgcggagatc gccacaacg 360
 tctccaccaa gaagcgcaag gacat 385

<210> 2600
 <211> 389
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-A1

 <400> 2600

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 cgccacaata ttatcgagga ttatggtgga agggggcaac gcacacggct aagaatatga 120
 tcacgtggat caacttgtgt ttatggggtg cccctaccc ccgtatataa aggagtggag 180
 gaggggaggg ccggccctct ctatggcacg ccctaaggga gtcccactct caccgggagt 240
 aggattcccc ttttcctagt ccaactanga gtccttccat gtaataggag tacgagacaa 300
 tgaaggggaa gagggaagag aaggaatgaa ggggcgcaac ccctcncct agtccaattc 360
 ggactaggcc ttgggggggc gcgtcctgc 389

<210> 2601
 <211> 443
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-A10

<400> 2601

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tgattcccgat agcatgcacg tatggatgaac cgctttgtga tgaagtcgga gcacaatttt  120
atttattgat tgtcttcctt atgagtggcg gtcggggacg aacgatggtc ttttcttacc  180
aatctatccc cctaggagca tgcacgtagt gctttggttt ttgatgactt ctaaattttt  240
gcaacaagta tatgagttct tttgattaat gttgagtcca tagattatat gactcttttc  300
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tccgagatat attgccatgc aac                                         443
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<210> 2602

<211> 384

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-A11

<400> 2602

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ttcgagagta ctatcaggtt gagcagttcg tcaagagaca aagagctgag tgtgagaagc  120
gtgacaagga caaaggccag aatgccgctg atggcaaggg ccgaggcggt gaagcaaadc  180
gccctggcaa gccctttagg agcaaaggaa aaccgccag gcgtcaggtg aaggaagcgt  240
gtgatcatga gagtgatgga ggggatgaag aggaaccag tgagcaagag tttcagaagg  300
ccaatgacgc cctatgcatt gatgggagtg catctttgca caccactaca ggaattaggc  360
actttgccgt cagccatggc tgac                                         384
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<210> 2603

<211> 282

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-A2

<400> 2603

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aatgcggcat cattgggtac ggtgcaggct tacagttcca cgctgattac actggttcca 120
gtcattttacg tgtgtcttat ttagcatgca agtagcagtc tagtgtctgt ttctcccagt 180
ttagttcaat ctagtttgac tatcaccggt ccttcacgaa ggtagaata gcaacacttg 240
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<210> 2604

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-B12

<400> 2604

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tgttcaaagg atatcatggt tgaatgaatg tatttgcatg tcccaaactt tgcaatgaca 120
acaaagcgtt cgtataatta tttatcctcc attgcatccg tttatgaaat ctgagagtcg 180
tccagtcgtc ggcttcagcc cctcacgtaa atactatggg ggtgttcgga acagcacaaa 240
agaacattta acccaataat ttggctctta aaggaggtgt tagtgccgag aaccaggcaa 300
tcggaccatg cggttttata actctcactt agccatagga gttttacaat aagattgtac 360
gcttagccct ggtattgttc ctgtatctga actcgggtgt tgtagacacc tga 413

<210> 2605

<211> 429

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-B4

<400> 2605

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ttatatattg cttatgtatt gtctgtgaat tggactaac gtttcgtttg gctagtgcac 180
agcgatgccg acgtatgtcg tgtacaaggg taagggtccc ggagtctacg atgactggga 240

ggagtgtcgg agacagggtc accgattcag cggtaacagt taaaaagggt acaccactat 300
 ggccgaggcc gaatctagat acgcccgcta tctagcggga gaggggaggg agcgttggag 360
 gaaccggatg aagacgagtt tcatcgtgat tatgctcatc gtgattaacg cagctctctt 420
 cgatgtgat 429

<210> 2606

<211> 372

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-B9

<400> 2606

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 ccccttattt tgtctttata aaaatgaatt ttgtggatcc aatagtgagc tgccctatct 180
 taaagagttg cagctcctac tgcattgaaa gttttcagtg ttggtttggg ccatcagata 240
 gacttgctgg agttgtttct cagatgctac catgcaacct caggaaatat ataacattcc 300
 tactgttccc aaaaaaaaaa aaaacaaaaa aaaaaaaaaa aaaaaaaaaa gtaaaacaaa 360
 ggaaaaaac ga 372

<210> 2607

<211> 426

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-C1

<400> 2607

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 tgacaaaact ttgagttatg cacggtgaaa ctttatttgt gatgtaatta aaccgtcctc 180
 ctccctcgact agcaaaaatc actctagtca ggtcattttg ggtacgatga actttgttat 240
 ttatgcttat gatatgttgt ttctaatttt gccaaagtctg tctctttctg ttgctcaact 300
 atatatgttg catatcatcg actcatgtga tgatgcaggt gcatagatca tagatggcga 360

agaagtgcta cgccaggagt atatatacga caagtggccg agtgtcaggc cctgggtgtac 420
cggttt 426

<210> 2608
<211> 420
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-C10

<400> 2608

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accaataaat aaaatgtcaa tagagtctca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagaaaaa 180
aaaaaaaaaa aaaaaaaaaa aaaaaggggc ggctcaaaag gatcaaagtt aagttacgcg 240
tgaatgaaag gtaaaagctc ttcaaaaggg taaccaaata taaattaagg ggccgtcggt 300
taaaaaggct gtaatgggaa aaaccttggg gtaaccaaata taaatcgctt tgaagaaaat 360
ccccttttcg caaatggggg taaaaccaa aaggcccgaa ccaattgcc ttccaaaaat 420

<210> 2609
<211> 392
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-C11

<400> 2609

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aaacgttgct ggtcctgccg tgcttctttt gtatcatttg tcttcccata cagcccaaag 180
aagcttagga gggtcacgca aatattcttc gtaacgtgca tcacgtcgat tgcagagcgg 240
acttctagga ctttccaata ttctagctcc cagaatatag atttcttctt ccacatgggt 300
gogtgcccgt cagctccctt cggaactgat tgtccgccag gaccctttcc aaagatgact 360
ttcaaatcct tgaccatata aaatacctca gc 392

<210> 2610

<211> 401
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-007-Q1-E1-C12

 <400> 2610

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 cctgatggta tatatcctca gtagtcaact tttgtgaagg caatctcgaa gcccgaaggt 120
 gagaagagaa agagatttgc ccaaagcaaa gagagtgccta caaaggatgt ggaacgtgct 180
 tttggtgtgc ttcaatcccg atgggggtata gttcgatacc ctgcactgtg atgggatgaa 240
 agtaagcttt gggaggtgat gactgcttgt gtgatcatgc acaacatgat cgtcaaggaa 300
 gagcgtgatg aaactatctt cgaccaatga tttgattttc aacgtgacaa tgttgatccc 360
 ctgcatcatg aattcggcac gtttgatcag tttgtccagt t 401

<210> 2611
 <211> 89
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-007-Q1-E1-C8

 <400> 2611

 cgggtccgcc aacggccagc cgaatcaacg gaaaaggaat ggcttcaacc aggggagact 60
 taggatggga gttcggcaca ggcaaactg 89

<210> 2612
 <211> 443
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-D10

 <400> 2612

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 tatattttga atggtggggc agtaagctgg tgcagttgca agcagagcgt cgtggcggga 120
 tctacatgtg aagcggagta catggcagcc tcggaggcag cgcatagaagc aatttgggtg 180
 aaggagttca tcaccgacct aagagtcata cccaatgcgt cggggccgat caagctcttc 240

tatgacaaca ctggagctat tgcacttgcc aaggagctca ggtttcacaa gaagacaagg 300
cacattaagc gtcgcttcaa ctccattcgt gaaaacgttc aagatggaaa catagatatt 360
tgtaaagtac atacggacct gaatgtagca gatccgttga ctaaacctct ccttagagca 420
naacatgata aacaccagaa tcc 443

<210> 2613
<211> 316
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-D12

<400> 2613

gggtcgatgc ggcgctctat ctgagctgga ataacaagcc cctcgctgctc tctccgcat 60
ggcactagtg ttgtggtggt actgctttgt gacttcgctg ctgtagacg aatctagatg 120
catgctttgt tggactctag ggtgatgctg ctgctgtgga gaagaatagc tcccaagtaa 180
cctgctgttg taatgccgaa cttaggtcta ggctgaata aggctgatga gatgtagtgg 240
tacaagttcg agggctacag tatatgtttc agtttcagac gtctaattctt aatgtaattg 300
catttaatta tgtctc 316

<210> 2614
<211> 450
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-D2

<400> 2614

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cgaggacttg gaagccgctc tgccaggccc gccgccagga actccacctc cgtctcgcat 120
caccagcag gagactccag cttctccggc tgcgggtcca gaagatgata tgccctctgcc 180
tcctccccct cactgaccc agcatgagga ggatggaacg ccagaagatg atctgcctct 240
gcctcctcct cctccactgc cccagcagga ggctggagcg ccagggttcag cgccagacgc 300
aggagccgct gatgacaagt gggcaggagg tggcgatgac aagtgggagg gagggccgga 360
tgacaagtgg gtctagtggg tgcttagggc gtggaactga actgaactga actggttgta 420

catagatgct cgtaacgtcc cctgctgaaa

450

<210> 2615

<211> 248

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-D3

<400> 2615

acggtcctga tttccgggtc gacctcgaag ctgcaagcga gagtgaacct gacaaagctt 60

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ccatcagagg agcagctgtt ccatggggtc cagcagcatt tccagtcca gcaattggat 180

gagttgcagg tgatcctggg gttcatccag acggcaaaga ggctcaagac cctgtacaag 240

aacagctc 248

<210> 2616

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-D4

<400> 2616

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gttaaggatg ttggctgcct tccaacagct catgagctgc ttgtgcagtg agtcctttgc 180

caagggtgtg ctaaattgct catgttgcag tcacaaatgt gaaatgcttt cgtgaggtgt 240

tagcattgca cggtgcaatc tatgtaagca agcaccggct ccagtgaatc ctgcaatcaa 300

gaagatgctg tgacgtggta cagaattacc cacgatggac tgtaaacca gacatgtgtt 360

caagcatttc tcagcatgtg ctcttctgcc atcaggtttg ctctgtcgaa aactgcaact 420

atgttaagac gaaagctggg gatgggat 448

<210> 2617

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-D9

<400> 2617

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aaataagctg atagtTTTTT tttcgaaacg gaaagtaagc tgatagttaa aatattgtgt 120
cattttccta agcacctcga gcgtgcctgg ttaattatct cgttttgacc gcccgcaaaa 180
gatcatctcg ttttgataca tcttagttca aatttacttg caatctttaa atgcaagttt 240
gaaaataaat aaatatactt gcagttcata ttagattac actagtaaac atgccccatgc 300
gttgtagcgg gaaaaatttg tatattccta gcacaataag cacgactgaa gaccctcca 360
ctggtagcaca ttatcaattt gaacatggcg ccaagtcctg gttgtcactt aacctc 416

<210> 2618

<211> 436

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-007-Q1-E1-E1

<400> 2618

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gatcgacacc aaagagaagg cggacggcga gctgaaaaac aagcctaagg agaagatcac 120
cagatggaat gagctcctgg aagccgcaag ggagggttga ttgaaggga tcgaacgggg 180
ctgctggttc aagcgtaaac cgaatcacag aaacagactg cgaggcacia tctgaatact 240
gaaagaacag cctatcacgt acataccgat gagccaatga aagtcaagt ctaataatgc 300
agtcttagca gtgaatcact cgtacgcata cacagtactg ccaatcctgg ttaaaatccc 360
caanaggctc gaccactgca gccacatgaa acgattgtag tctgangag tanaactgct 420
atatgaactt ttgcac 436

<210> 2619

<211> 393

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-E11

<400> 2619

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cgcccctacg gccagcgcg cgtcctcaag ttcgcgcagc acaccggcgc caacgccatc 120
gccgggaggc acaccctgg taccttcacc aaccagatgc agacctcctt cagcgagccc 180
cggctgctca tctcaccga cccaaggacc gaccaccagc ccatcaagga gtctgctctg 240
gggaacatcc ctaccattgc cttctgtgac accgactctc ccatgcgata cgtcgatata 300
ggtatcccag caaacaacaa ggggaggaac agcattggct gcctctactg gctcttggcc 360
aggatgggttc tgcagatgag gggcaccatc ctg 393

<210> 2620

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-E3

<400> 2620

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catacatgtt ttggccccga aggaaaactt gtaaagggtg tgtccaatct ttctgccac 120
actcgacctt tgtcctatgt ggagtcttga gcatgctttc cgaggggaaag agaacggctg 180
tttagactga tcgatagcag taagagacat ggggtcttaa ttattagtgg tgatgttcat 240
tttgagaaaa tcgctcgttt tgactgcggg gttcaatata cattgtatga tattacctcg 300
agtggctcta ctcagtctgt cgagaattct gtaccagcaa tatttcaatc tggtatgaga 360
cttctggctt ggctgacaac aacccccatg ccagtcctca gccctaactg ccgtcacaaa 420
tcatgctcat atggtcagcc aaatt 445

<210> 2621

<211> 369

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-007-Q1-E1-E4

<400> 2621

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aggcagaagc attcggcacg atcggcgctg ctttggggcgg ctggagcaag aagagcaaag 120
 gttgaagaag cactacggcc gttggatgga catcgtaagg tcaactggagc tagaatcggt 180
 catattgact aaattgacaa agcccttcgg ccccgtaaac ttagtaggcc cacaagacag 240
 cctcccacca aagtgggtcc cagctagccg ggggagtatt catttttttg tgcataataa 300
 ggaggcactt ccggtgggtc tgagctgaca gcgggggaac attttttttc ggagttgggtg 360
 agtagaggg 369

<210> 2622
 <211> 72
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-E8

<400> 2622

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 cttcctcagc ct 72

<210> 2623
 <211> 420
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-E9

<400> 2623

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 gtgacctacg cggcgaaggt ggcccaaaca gcagcggccg agaagaagcc tgtggccacc 120
 gagaaaaagc ctgtcgtcgc caacggtgct gtcaagaccg gtgtagctgc ttgatcgcat 180
 acctgatcct cccagctagc catgaggaac aaacggacgg tgctggcgaa ccaggcgaga 240
 catgcagggt cccaagtacc gatcaccaaa ggtggctgga aagcggggtg gatagttagg 300
 ttattccct agctctcttt ttctcctgtc atcgctgtat tatccgtatt tcagtttgct 360
 tagctctaaa gactcctcct atagtggat caccggaatc accagaaaaa gagaaaagag 420

<210> 2624
 <211> 425

<212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-F10

<400> 2624

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 tgaagggctct gttttgcact gatgctcaag tgtatgtatg taagggatgg caatcggtaa 120
 tcatatgttg cggatgcaga acattggcta cggcatgact aaatatttgc ctcagggatga 180
 cctctgaagc ttctgttgct gattctctgt tcccactatg tactatgggtg aaaattgtat 240
 tgttctgctc atctgagccc tgtatctgct atttgaggag gaaactttgc gtgccacgat 300
 tctatctttc gtcgaaaact tagaaatcat atgtaaaact ttgagtgtat catcagtga 360
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 tgtag 425

<210> 2625
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-F12

<400> 2625

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 ttgcggaagg tccttgcatt cagtgatctg gataatgagc aagcaactaa aagtgtcact 120
 gatgcactcc tgtacaaagc tgatgcacca catcgacagc gcgcccttgc tacagatgtg 180
 ttgacctcta ggaaatatac tgaacgagct taaaaatata gcccaactta ggtgggtggaa 240
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 cgactattcc catctgggag gatttactcg caagcattcc atcttgctgg acagggattc 360
 ttcctctcag cacattgcaa catggatcag caaagcgctt tccactgctt tgggtctcttc 420
 ttggggatgc aagaga 436

<210> 2626
 <211> 442
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-F2

<400> 2626

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acatggactt gtacatggaa catcccaagc gcaagcagag ctgcagtggag cctgtacaac 180
gagctagcat aagtcacctac atttcattta attcgtactg gcattcgtgt atgatttgtg 240
tgcagtggcg gatccacgaa ttcaagttac cagggggcgaa catttaactt aaaaatacga 300
aggcacttgc actccggaaa tcaacataac ttgagaaatg tgaagctaca tgcactttga 360
aaaccagcta atgatccaaa gtagttcaga ttataaacac taaatgatgc aagcaccana 420
aaacacaaaa tgcaacatgg tg 442
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<210> 2627
 <211> 396
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-F6

<400> 2627

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gggtatcgct aaaataagtc gtcttaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaatt 120
taaaaaaaaa aaaaaaaaaa aaaaaaaaaa gggggggcct taaagggtttt aattttttttt 180
ttccttttaa tgaaatttta aaccttttta aattttcccc caattttaat ttcaggggct 240
ttttttttta aattttttta ggggaaaacc cttgggttttc ccaattttta ccccttttaa 300
aaaattccct ttttcccaat ttgggttttt tccaaaaggg ccccaacttt ttccctttcc 360
aaaatttttc cccctttaat tggaaattgt gaaccc 396
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<210> 2628
 <211> 441
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-F7

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 gagcagctga gcggacagtc acctgtgttc tccaaggcga ggtacaatgt caggtcgttc 180
 ggtatcaggc gtaatgagaa gattgcgtgc tacgtgacta tcaggggtga gaaggcgatg 240
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 gacaccggct gctttggctt cggtatccag gagcacatcg atctcggcat gaagtatgat 360
 ccatctaccg gcatctacgg tatggacttc ttcgtggtgc tcgagcgtgc tgggttacgc 420
 gtctcccgcc gccgcaggtg c 441

<210> 2629
 <211> 439
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-G10

<400> 2629
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 gtggctggtc tcaactcttct gcttggaatg ctgataaaaa gggaagcgct gaagacgatc 180
 aatctttctc aaagggcaag tccagctggg ggagtgacaa caacggtagc tggggagctc 240
 caaaaccatc tgggtggtgat gatcaggcag gaaagaagga tggaaacaac acctggagtc 300
 aaaacaagcc attttctggc gatggatcct ctatcctggg ccagtgggct cctgctggcg 360
 gcgccaccgc tgggtactgca ggatctgcan gcggaggaag atcatgggga aagagcaatg 420
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<210> 2630
 <211> 385
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-007-Q1-E1-G11
 <400> 2630

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gaaggtacca ccagcgccat cctccttggc ggacaccttc ttggtctcag gtggagctgc 120
cattgccttc ctacacttgc cgggtggagct cgatggtgcg tcctcgacgg tagcgagca 180
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<210> 2631
<211> 425
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-007-Q1-E1-G12

<400> 2631

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gcgggcagca gcgacgggcg gcacgatgac gaggccgtac tcaactgaatt cctcccctcc 120
ctcaagggct aaaaccccat gattccggac gaactcctgg agcactaact ccggcgcaac 180
ggcttcact gccctgacct acgccttaca aggttggttg ctatagctac tcaaaagtcc 240
atttcagacg tcgcaagtga ctcccttcag cattgcaaag ccagggttgc agcacctatc 300
anagacaaca agagcaaaca accgaaggat agacgtcttg tattgacaat ggatgatctt 360
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ccatc 425

<210> 2632
<211> 373
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-G8

<400> 2632

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aatagaaagt ccccgaaacgc tccgattggg caatttgaaa aactttaagg ttcctttttt 120
 tgtcagtcac atttccatct ctccaccat aattcgggta cataacttgg gagacatttt 180
 atgctggcta cctgtagcgt gtactcccag gatccactgt gctgctgttg tcgacaaaag 240
 ctgtaactgg ttgctaagtg atttgcctac ctggatatggc agtataaagc atatgtatca 300
 atatcaagcg ctaccacata agtagaagtt tacaatgagt cgtcagacaa cactgcgggt 360
 gtggtggtta aac 373

<210> 2633
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-G9

<400> 2633

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 ttgaccatgc cataatagca gttaagagta cacagggaga ttggagccat gaagcctact 180
 tactcttccc agtccatttg gatggtactc tggtcgacaa tgctgcagtc atgcagtcaa 240
 ggaaagagtt ttattcgggtg gtcgatgttt tgccaatatt ccaacagatt tgtgaaggac 300
 tgaagcacat gcatagtctt gatccaccat atgcccataa tgatgtcaag cctggcaatg 360
 ttcttgtaac ctgccgaaaa gggcaagcac ctcttgcaac tttgatggat tttg 414

<210> 2634
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-H10

<400> 2634

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 accaaagctc ttgatctttt aagaagcgaa ggagaagtgc tcgatctaca cattcaccaa 120
 agcgaaagtt gattcttccc ttgtttttgt ggtgcatctt gttactcttg gaggttggag 180
 actcctaggc agtangagtg ctccggcgag gaatcgacca ttgtgatttc ccccgaaag 240

tttgtgaggg tttggagacc acccaaggtt taccactagt gggtgagaaa cgccttgggtg 300
 gtgttgtctc aaagagagaa tagggtagc cttcgtggcg ttggtgcctt cgtggtaaca 360
 tccacctgtc taaatgggtga cgtagcttcc ctccaaggaa gtgaacatcg acatacatcc 420
 tcgtctc 427

<210> 2635
 <211> 219
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-H12

<400> 2635

ggggacgcca tagcattagc attgctgtag tagggagggg ttctgttgct gtactgtact 60
 gtatttgtac tactttatac gtacttggtg gagtaagaag aagatggatt ggaggctcaa 120
 gttcttgagc ctacaactat aacacttaga gtcgcagtga atggatcaat cacagcctgt 180
 gcgttgttgt tattgtaata atcagtagcc tgtgcactc 219

<210> 2636
 <211> 367
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-H2

<400> 2636

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 cataggctag cttctagggg ttagcctcct tgatctcgtg gtagatccac tcttgtaaca 120
 cacatcttca atattaatca agcaggtcgt acggttttac ctccatcaag agggcccgaa 180
 cctgggtaaa acatcgtgtc cctcgtctcc tgttaccatc cgcctagacg catagtccgg 240
 gacccctac ccgagatccg ccggttttga caccgacagt cacctcatca ccaactcggcc 300
 gccccacgcg tcgccatcag ttggtcacct cataaccact ccgcgacccc acgcgtcgcg 360
 ataggtt 367

<210> 2637

<211> 425
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-H3

<400> 2637

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agaaaataat acaagtatct atctaaacat acaagtaaga atatttttcc ttccagaaag    120
aagataagaa caagaggctc accacggtgg tgccggcgat gagatcgacg cgggtgatcg    180
acggcgggtga agacggggac ggggcgtgac ggaccgctaa acctagacaa atattgaaga    240
aatggagct tggangtcga gcttggagaa gagaaagctt aagtagtgtg gctcgggcat    300
tccatcgaac aacttggtg catangaagt gagctagagc aacacaaacc ctctccccct    360
cggcgggcag aanaaacaga gcagtgtgct gtgctcttac gcgaggggggt atatatangc    420
gcctc                                                                    425
  
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<210> 2638
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-007-Q1-E1-H4

<400> 2638

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cgacggtttc actgcacatg ctgtggacga gcgagtttat tcgagagcta gatccttagt    120
acattgagac gccacaaggc gggcaccgc aagaacattc ttgtaatagt tctcgggctt    180
gctatgcgcc ttggtgtacg aatgggtggg cggatgggat gggagtgggg aaacatggct    240
tatggacgcg cttatctgaa atgtggggta agtcacgaaa ttacccttac cgatttgagc    300
taggcggttc tttcggttta agggatcac gggcatttca cgtgtcgaga tttcacagga    360
ggtgggagtt tttgcgcgcg ttgtaatttt ggaatangaa ggtgtggggt gagat        415
  
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<210> 2639
 <211> 396
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-H5

<400> 2639

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tatttttcct ttcagaggga agataggacc aggacgctca ccacgggtggt gccggcgatg 120
agatcgacgc ggggtgatcga ccgcggtgaa tacggggacg gggcgtgacg gaccgctaaa 180
cctagacaac tattgaggaa aatggagctt ggaggtcgag cttggagagg agaaagccta 240
agtagtgtgg ctccggcatt ccatcgaaca ccttgtgttc ataagaggtg agctagagca 300
ccaccaagcc ctctccccct cggcggggcca gaaagaacat agcagtgtgc tgtgctctta 360
cgccaggggg ttaatatagg ccctcattgg tcccgg 396

<210> 2640

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-H8

<400> 2640

ggggccgcac aaaaaataat attttaaatt caacaagcat tgcttaagcg cctatgaaca 60
agttttcagt gcacaggata aaaacgagcg agtttattca aaaattacat ccttggtaca 120
ttcatccgcc acaaggcggg caccgcgaag aacattcctg gaataattcc ccggccttgc 180
aatgctcctt ccccggcggc ggcccgtcct tcacaagctt ctcaccgtcc agcttacccc 240
agtgcacctt tgcacgggca aaggggccga cggcaccttt tgatgcagac ggagtgcctg 300
atgacctcaa gccttgga ggcctccacc agccgcgca ccatcccgaa gtagctccca 360
agcagggcct ctccgggcca cagctgaact atgaagcctt tcat 404

<210> 2641

<211> 437

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-007-Q1-E1-H9

<400> 2641

gggtcgacac gtgtcactca tgaaaatcga aacatttcaa caaaaataat tatccccttg 60
 tacaattcca ttgtattgta aaaataatgt gccaaagggtt tccttttagga tgtttacatt 120
 tgcttgatgg tttgtacggg gcaggacaga aactttgggt gtagtgcacg attttacatt 180
 tttagctgga acgtcaaatg gttctgattc tttttgcaact gtcttcctat acaatttttt 240
 ttatttttcc taattttggg agaacttatt aagtatcaga agtatgggtga atgttcagat 300
 tgctacagac tgttctgttt tagacagatt ctgtttttga tgcatagttt gcttgttttg 360
 atgaaactat caatttatat cagtggatta agccaatgaa aaagttatac atagtagaca 420
 caatgcaaaa acaaaat 437

<210> 2642
 <211> 279
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A1

<400> 2642

ccccggggag ctccccaagc acgccgtctc caatggtaca aaggccgtca ccaagttcac 60
 ctccccctag acggatgcgt ccgtcgctc tagttggtat ctgtatctgt agtgctgact 120
 ctgcttgta ctctgcaagt agtgctggta gtctgtgtgc tgggtgctcg ccaacgcttc 180
 gttggctgat tggctgtatg aactgaagtt gttgcatttg gcagactgat atctatctag 240
 aactgaactt gtggtggtac ttaaaagaaa ccccgaaatg 279

<210> 2643
 <211> 365
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A2

<400> 2643

ggtgccccag aaggcatccc ctctttcttc aacaagtatc agtatgtttt cgtattcggt 60
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 ttatgcaccg tgctggatg agatagtcct tggttgattt atagaatgct cattgcactt 180
 cacttaaate ttttgagtgt ggctttatag aatgcttcat gtgcttcact tataggatgt 240

gaagtctgga ttgtctgttt ctctttccat agaaaactgc catttgtaca atgctcattt 300
gcttcactta tagatgtag atcgtgggca tatcttttgt agaaattatt aaactctctt 360
gcttc 365

<210> 2644
<211> 355
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-008-Q1-E1-A3

<400> 2644

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tggtgctaaa agagttgcag ttctccgcaa tctttgcaa aaggtcggaa taacaattgc 120
tgctcgcaaa tacgatctgc attctactac tccattccaa ccttcagata tcttgaatct 180
ccaaccagtt gttaagcact cagttctac ctgtactgat gcaaggaagc ttatggaagc 240
tgggaaaatc cggatggctg aaggaactct aatgangcg tatgcactat tttctgaagc 300
tttttctcta cttcaacaga tcaatggtcn catgcacaan gatgctgcga actgt 355

<210> 2645
<211> 55
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A4

<400> 2645

gactatgaca tcaactctgt ctggaaagct gctgacctgg cactgcattg caagc 55

<210> 2646
<211> 374
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-A5

<400> 2646

cgcggtccga agggcaatgg tgccaatagg ggctcgtccg cggccgagga cgagcagtcc 60
accgcggcgg tggcggtgca gctcgccaag gactggagca cgtggacgat gaagacggcg 120

aaggtggtgg tgcactgggg cttcatcccc ctcatcatcg tcgtcggcat gactaagggg 180
gacgagccca aacctagctt gctccagctt ctgacccccg tctgattcaa tccccggcga 240
gccctagact ggatcgatcc atctcctttt agttactact agtagatggt tttgctgttt 300
attgaatcct ggtggttgag ttcttgatcc ctgggtggtg atcttttata tgatctgtgt 360
ctaataatgt tatg 374

<210> 2647
<211> 325
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-008-Q1-E1-A7

<400> 2647
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gaataataag agtacttccc ccacaaaaag ggactacatc ttactcaaga aagaaaccaa 120
atthtagaca aattgtgtga attgcaaaaa tctattgagc ctcttaaaaa tgthgttggtg 180
aaccttcacc gtatgaatac attgatcact cthtgtaata aagcggthtg atgctctaga 240
tctaaaaatc tccgagcatg aagggaaacg taagaaacct cactgattcg agcacaactc 300
cattaanaga taagtaccaa aagag 325

<210> 2648
<211> 252
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-B1

<400> 2648
gtthgaaacc ctcggtgatt tatgaatcca ttacttcatt cgtgaagcaa agcgggtgtg 60
cggtgcctct gtactgggtc atatcacgac gtacctcgga agcactatgt ctgttgthgtt 120
cggtccggcc gaattthgtg catccggagt gaagatcatt gtcacatgcc gtagggcgcc 180
tgtgcgatcc gtagatcgat thtgthgtc thgtcttata ctccagtatg tctcgcaggt 240
ccgggtccatt th 252

<210> 2649
 <211> 470
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-B5

<400> 2649

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gggggggggg gtggtggggg gggggtgggg tggggggggg ggtggtgggg gggggggggg  120
gggggggggtg gtgggggggg ggggtggggg gggggggggg ggggggggtg gggggggggg  180
gggggggggg ggtgggggtt ggggtggggg gtgggggggg gggggggggg ggggggtggg  240
gggggggggg ggtggggggg ggggggggtg gtgggggggg gggggggggg gggggggggg  300
gggggggggg ggggggggtg gggggtgggg gtgggggggg gtgggttggg gggggggggg  360
gggggggggg gggggggggg ggggggggtg ggcggggggg gtgggggggg ggggggggtg  420
gggggggggg ggggtggggg gggggggggg gggggggggg gggggggggg                470
  
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<210> 2650
 <211> 382
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-B7

<400> 2650

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gaattcttct ccaacggctg cgggtggctgc cgcgctctcc accccaagat tgcgcagttc   60
gctgagcgga atccggacgt gctgttcctg caagtcaact acgagaagca caagtccatg  120
tgctacagcc tccatgtcca tgctctccct ttcttcaggt cctacagggg agctcagggc  180
agggtcagca gtttcagctg caccaatgca accatcaaga agttcaagga cgccctcgca  240
aagcactcgc cggacaggtg cagcctcggc cgggcacggg ggctcgagga ggcggagctc  300
ttggctctgg ctgcaaacag ggacctggaa ttcacctaca acgagaagcc gacgctgggtg  360
ccgatcgccg aggccatcca aa                                           382
  
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<210> 2651
 <211> 209
 <212> DNA

gtcatgatgc agaaaatagc gaggcattgt aatttttttc tttccttact atggcccatt 300
 gttaatgaaa atagctggta ctgtatgttg tacaatgtgg catttttagct gtatgaatgg 360
 tggctctgttc tttgc 375

<210> 2654
 <211> 191
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-008-Q1-E1-C4

<400> 2654

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 aagcatttca gtttggtgtc gttcttatat cttgctgctg aatatcactg ctacttgcca 120
 ttagtgccctt gttgctgact ttcaatttct tgtatcctgg aaatgctttc taagtacata 180
 atatcatatg c 191

<210> 2655
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-008-Q1-E1-C8

<400> 2655

accggtcgag ccattcccgg gccgaaaggg aagagatccg tcagcacgac ggcgtggtga 60
 tgatcttgat gcactacagc agcaggggctt cgcctaaact ccgctacagt attatcgagg 120
 aatatggtgg ctgggggcat cgcacacggc taaggaatag atcacgtgga tcaactttta 180
 tgttctaggg tgctctacc tcagtatata aaggactaga ggggggaagg ctggccggcc 240
 acaggaggcg cgccaggaga gtcctactcc ctctgggagt aggatcccc cccccccaa 300
 tcctagttgg aataggattc gcagaggggg aaaagagaga gagggggccg gccacctctc 360
 ctagtcctaa taggactagg ggaaggggga ggcgcgcagc ccatgtangg ctgcctc 417

<210> 2656
 <211> 363

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-D4

 <400> 2656

 taccggtcaa gcaattcccg gagcgacggg aacctgaaga ttggcaaggc catgaggtgg 60
 tgggagaagg tgacgcaccc caacatgagg gaggtcgagt ccgcgcacga gctcgcttac 120
 tccctgctca acgccggcga caagctcgtc gtcgtcggtt tcgtctcccc cggtgcggt 180
 ggctgccgag ctctccatcc caagattgag cagttcgctg agcggaatcc ggacgtgctg 240
 ttctgcatg tcaactacga gaagcacaag tccatgtgct acagcctcca tgtccatgtc 300
 ctccctttct tcacgttcta caggggagct catggcacgg tcagcttctt cagctgcacc 360
 aat 363

<210> 2657
 <211> 306
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-E3

 <400> 2657

 gtggcgcatc gggctccaac tcgcaggcga atatcaatgt caggcacacg ctcacgcga 60
 tggacgctgc gcagatgatt cactaagcct agccctacaa gtattgtcac atcagtctcc 120
 gtttctgtcc cccttcaactc tgtcttgatt ttgacgagga atgctccccg tttaatcagt 180
 actgttgaat cgttgtgtcg gtttctgaca ttgcggtacc aacgacctcc tgggcagtc 240
 actctgacca ttgtttcggc cctccagttg gggaaccccg tttccatgtc cccagctggc 300
 tgggtca 306

<210> 2658
 <211> 264
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-F1

 <400> 2658

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catgcaatgt gcactcgcct cgccgtacgt cagttgtcaa tggctgctca tatctgaagc 120
cccgtaaata ctgttaacgc ccatgtgggc gctctctctg tccgggatct ctatgtggat 180
ctgtgatatg acgtgttagt ccgaatcgga gtgtgacact gatatcatga gtcagtaata 240
atacatgtgc ttgagaactg ccaa 264

<210> 2659
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-F11

<400> 2659

gggtcgacgc ctgcatcaaa accttcggct gcggctccgc aatcgcgctg tcctccgctg 60
ctactgaatg ggtgaaggga aagcaaatgg aggaagtagt gagtatcaag aacactgaga 120
ttgcaaagca cttgtcactt ccaccagtaa agctccattg cagtatgctt gctgaagatg 180
caattaaagc tgccgtgaaa gattatgaat caaagaaggc gaagctggga gacagccctg 240
cagagaaggc tgccgaagca tgaacatgat atatgcttct gttctatgag ggtgagaaat 300
gggtgtgcaat gttgacaaac tccagtgttg tagcatgtat cataaggatg aacacgaaca 360
acttgaaata aatgtgatgt catgttagga gaagttgtgc atgtatagca gctgctaaga 420
aaatttgtgc 430

<210> 2660
<211> 445
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-F12

<400> 2660

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gaccctttca gaatcgagat gacggacatg ctgatcgata agctgtataa tatgggtgta 120
attccaacaa agaagagctt ggttaaatgt gagagacttt cagtgagcgc cttcgccagg 180
cggagacttg caacaattat ggtgaagctc aagtttgccg aacaccttaa agaggctgtc 240
acctacattg aacaggggca tgtgogtgta ggccagaga cggtcaccga tccagccttc 300

cttgtgacca ggaacatgga ggacttcac acctgggtgg attcctcaaa gatcaagaag 360
aagatcatgg agtataatgg tgcattggat gattatgatg ccatgattta aggatatgtc 420
gtgatagtag aaattttggg aacat 445

<210> 2661
<211> 391
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-008-Q1-E1-F2
<400> 2661

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gcgggggcat ccggctcgtc ctcatgcttg ggaaggacga cgacganggc ggcggtcgtc 120
ctgcacacca tggcatagct cggggaggan ggggtggccg cgggtatgcc ggagccacgg 180
ttaccgcggc gctcggtccc ggtccagatc gaaagagagg cgagtgaagg gaaagtggga 240
ctgctacggt tcgaggtaga ngaagcgggg gccatggggt gctcttatcc accaaggaaa 300
acgtcgggga ggcgcgggat ggctgccata gcgtcatcgg tggccatggc accggtggat 360
cgtttccacg attcctgtgt gtgaacaggg a 391

<210> 2662
<211> 268
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-008-Q1-E1-F3
<400> 2662

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cttacgaact aagtactggt attttgttgg tgttggcata tgtaccactg gttcttatga 120
ccttgaatgt actagtagtt agcacaagaa agagtggcgc aatattcttt tgtggcctcg 180
gtgcccttat gttgttacct tcatgttgat tctcttgacg attcaagtca ggcatacaaa 240
attcgttgtc aatttccac ggtcaaca 268

<210> 2663

<211> 375
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-008-Q1-E1-F4

<400> 2663

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 tactcatcca gttgtaaatg acggtgacat gtacttgtgg agagaactgg ggggtgaactc 120
 ttggccgacg tttgtggttg tcgcgcccaa tggaaagggt ctagcacaga tatcaggcga 180
 aggccacaga aaggaccttg atgacgtagt tgggtgcagca cttgagtttt atgatgaaag 240
 gaaattacta cagaataatt ccctcccctt ggcgttggag aacgacaggg ataatcgact 300
 aataacttca ccactaaagt ttcttngaa acttgcaatt gatgtacaga acaatcgatt 360
 acttatatca gacag 375

<210> 2664
 <211> 378
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-F5

<400> 2664

 acggtcagca attccgggcc gaagggtcgg ccaaccagcg gcggttcgcc atcgagtccc 60
 ccttcttcac cgccgcgaga ggcttttctt cggttgaaac acttgttcca cggaaccaag 120
 atgctggggt ggctgaactc ccagccactg ttgctgcact gaagaacccc aactcaaaaa 180
 tcctttatga ccagtacaac catgaaagat atcctcctgg agatcccagc aagcgtgcct 240
 ttgcctactt tgttctgagt ggtgggagat tcgtatatgc atcactgctg cgtctccttg 300
 tcttgaagtt tgtcttgagc atgtcagcaa gtaaggatgt tcttgactt gcttctcttg 360
 aggttgatct atccagca 378

<210> 2665
 <211> 424
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-008-Q1-E1-G12

<400> 2665

tatcctaact cgtatcacct ttgatgatct tocatcgaga agcgcaacac ggttggcaag 60
gagatagcgc ggctttaggc cgctgagttc atctgagagg tgtaccactc cgagtggctc 120
gccaacgtcg tcatggtgcc caaaaagaat aactccctcc ggatatgtat tgattttaag 180
cacatcaatc gggcctgccc aaaagatcat ttccatcttc ctcgcataga tcagatagta 240
gattctactg cggggttaga gcggttatca tttttggttg cgtactccgg gtaccaccag 300
gtccgaatat atggtcctaa tgaaataaaa acagcgtcca ttcgggtggt tttgttatat 360
cactatgcca ttcgggttga aaaatgttgg ggccatgatt cagcctatga ttcagaagta 420
ccac 424

<210> 2666

<211> 394

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-G2

<400> 2666

actcgtgagt cgatgggcgc ccggacacta aatcaataaa cgtgcatatt gactaagttg 60
acaaagccct cgtcccccgt caacttagta ggcccacaag tcagcctctc actatactaa 120
gtctcagcta gcacggggag tattcatttt tgtgtgcgta ataaggatgc acttccttgc 180
gtgcgaagat atagctggtg ggtccgagct gtcagcggcg gtaacatttt tttcgcaaaa 240
tacagacgcc ctttcggttg gtcccagatg ttacgtggag gaatcattat tttgcgcata 300
ataatgatgc atgtccttgc atgcagccgt ggaccagct gtcagcctct ccacgtacag 360
tccacttcag atgcatgtcg gtcgttgacc acat 394

<210> 2667

<211> 372

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-G3

<400> 2667

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tctcgagagc ataagtatta cgggtgggtaa acaaattact gttgagctat tgacagaatt 120
gagcatagtt atgagaatat ctaggtatga tcatgtatat aggcacacg cccaatacaa 180
gtagaccgac ttttgectgc atctactact attactccac acatcgaccg ctatccagca 240
tgcatctaga gtattaagtt caaaagaata gagtaacact ttaagtaaga tgacatgac 300
tagagggata aactcatgca atatgatata aaccccatct tgttatcctc gatggcaaca 360
atacaatatg tg 372

<210> 2668
<211> 393
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-G4

<400> 2668

gtttgtcaat tgctctagtg cttcacttat atccttttag agcacggagg tggttttatt 60
ttgaagaaat agatgaactc tcatgcttta cttatattat tttgagagtc ataaacagca 120
tggttaatttg ctttggttat gaaactagtc ctaatatgat aggcaccaa gatgggtata 180
ataaaaactt tcatatagag tgcattgaat actatgagaa gtttgatact tgataattag 240
tttgagatat acagatgggtg ataataagagt catgctagtt gagtaattgt gaaatttaga 300
aatacttgtg ttgaagtttg caagtctcgt agcatgcatg tatggtaaca gttgtgtgac 360
caatttgaag catgaggtgt tctttgattg cct 393

<210> 2669
<211> 280
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-H1

<400> 2669

ttccccgggcc gaaggggggtt gaaagcttcg tgattgttta tcgctgttgg gtgcgggtggt 60
ccgcgggtccg gtgtgctctg cccgtgtgtc ctttgtgtgg gttccgtttg ttggctccgg 120
tcggctgtgc cgggtcgtgt cctcttgtct gggatgtcgg tgtgatgtgc caggtggggt 180
catcatggtg aagctgtggt cgtcaatgtt actaacgatg tggaagcagc agatcaccat 240

cctgattagc ctgatgctca ggtggaagag gaggacgacg

280

<210> 2670

<211> 457

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-H12

<400> 2670

ccgggtcgac gggctatctc atctccaacg acccttctct tctcttctga cagtcggggc 60
aagggtgcc tgactggctt ggcatcaggt cggacatgta gcttgtgctc ggcgaaatcc 120
gtcggaacac ccagcatgtc cttaggagac catgcaaaga tgttccgatt ctcacggagg 180
aaatcgacga gctcgccttc ctatttgctg tcaagatttg cgcctatgac agcgtgcctc 240
tctgggtgct ccgggtccaa gggtaactta tttgcttctt ttgccggctt gaacgagccc 300
tcagcttccg actccttggg gtttggcgac atttccggtt gcttgcctgc cattgccacc 360
acccggtcaa ggagccgctt ctctgctgca atcacgaggg actcggctag ccggctgctg 420
tctgccgcgc aagcggacga cttctttagt tctccga 457

<210> 2671

<211> 366

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-008-Q1-E1-H4

<400> 2671

attcccggac tcnatcgagg tccaacggga gtgccagggtg gctgcgctgg gcaagctggg 60
cgtggagagg tgcacgggtg tggggttcag ctacggcggg atggtggctt tcaactatggt 120
cgacgtgcac ccgggtccg tccgctcgca catcgtctcc ggctctctct tcaactatcag 180
tcaactctata cagtcataaa tgctggagag gatcggcgctc aagtcgctcag cggagctgct 240
gctgccggac tccgtcaagg tgctcaaggc gctgctctcc atcgccggat agacgatact 300
ctggttcccg gaaccggtc acagggacta cctccagggtg atgttcagca ttcgcagcga 360
aagatc 366

<210> 2672
 <211> 308
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-H6

<400> 2672

attcccggtcc cgacggggcgc tctagactgt gcagcgggtgg atgcttctga ggaagcacgt 60
 gcacgggatc taagggttaag tgcggggcggg atggaggatt tacacatagt cgacgtgcac 120
 ccgagctccg tccgctcgca catcgtctcc ggctctgtct tcactatcag tcactctata 180
 cagtcataaa tggtaaaaca cgataggtat caaatTTaat ctggttgtac tacatccagg 240
 tttcgtcagc tggcgcaacg cacaactcgc cagcaccgat cgcacttcgc aacagttcct 300
 gaaactga 308

<210> 2673
 <211> 392
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-008-Q1-E1-H8

<400> 2673

ttccggacca cgggggtcaa acggagtgcc aggtggctgc gctgggcaag ctgggcgtgg 60
 agaggtgcac ggtggtgggg ttcagctacg gcgggatggt ggccttcaag atggccgagg 120
 cgcacccggg cctcgtccgg tcgctcgtcg tgcgggctc cgtcgtcgcc atgacggact 180
 ccatcagcga gaccacgtg gagaggatcg gctcaagtc gtcggcggag ctgctgctgc 240
 cggactccgt caaggggctc aaggcgctgc tctccatcgc cgctcacagg aaactctggt 300
 tcccggaacg ccttcacagg gactacctcc aggtgatgtt caccaaccgc aaggaaagag 360
 cagagctgct ggaaagtttg gtggtcagca ac 392

<210> 2674
 <211> 228
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-009-Q1-E1-A3

<400> 2674

caatattgtt gactagaaag taagtanggc aacaagtagg agaatttaac ttggctgtgt 60
tttcaaaaga agctggcgca cctgaaagct gatttttgcac gttttttcccc atgcatgtat 120
gtaagcttcc aataacgaag caaccaatga tcttattagt gataaccatta tcatcactag 180
gtaagggttta tgatgtggtg cttaaaaaaa aagaagaatt tacaacac 228

<210> 2675

<211> 415

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-A4

<400> 2675

gggtcgacgg cgaacactac catgagtcac aatatgccgc cgaagtccaa ggagggcggc 60
gccgacaaga agaagaaggc caagaagagc gtggagacgt acaagatcta catcttcaag 120
gtgctgaagc aggtgcaccc ggacatcggc atctcctcca aggccatgtc catcatgaac 180
tccttcatca acgacatctt cgagaagctc gccggcgagt ccgccaagct ggcccgtac 240
aacaagaagc ccaccatcac gtccaggag atccagacct ccgtccgctt cgtcctcccc 300
ggcgagctcg ccaagcacgc cgtctccgaa ggacaccaag ccgtcaccaa gttcacctcc 360
tcttagataa tctgttctcg tatcttcttg gtcgttcgat ggtactctgt aatac 415

<210> 2676

<211> 391

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-A5

<400> 2676

tgtacgacgc caacatcctc atcaacaccg cccgcctcca cgcccagcgc tacgcgtctt 60
cctaccagga gcccatcccc gtgagacgac tegtccagtc cctctgcgac accaagcagg 120
gtacaccca gttcgggggc ctccgcccct tcggcgctctt ctctctcttc gcgggggtggg 180
acaagaacca cggcttccag ctctacatga gcgacccctc gggcaactac ggcggctgga 240
aggccgcccgc cgtcgggggc aacagccagg ccgcccagtc catgctcaag caggactaca 300

aggacggcat gacccgag gaggcgctg cccttgccct caaggctctc agcaagacca 360
 tggattccac tagtttgact gccgataagc t 391

<210> 2677
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-A7

<400> 2677

cggggaagaa gaagctgaac cccatgcggg atatcaaggc gcagaagctc gtcctcaaca 60
 tctccgctcg tgagagcgga gatcgctca cccgcgctc caaggctgctg gagcagctga 120
 gcggacagtc accagtgttc tccaaggcta ggtacactgt caggctgttc ggtatcaggc 180
 gtaatgagaa gattgcgtgc tacgtgacta tcaggggtga gaaggcgatg cagctgctgg 240
 agagtggcct gaagggtgaag gactacgagc tgctcaggag gaacttcagc gacaccggct 300
 gctttggctt cggatatccag gagcacatcg atctcggcat gaagtatgat ccatctaccg 360
 gcatctacgg tatggacttc tttgtggtgc ccgagcgtgc tgggt 405

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 <210> 2678
 <211> 324
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-B4

<400> 2678

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 ccatgtcgag gcactattac gggattatct gcggggaaca gattcccgct gtcgcctggt 120
 ctgcccgtgg cagctaccgt caactgcgcc gacaacactg gctccattaa cctgttcac 180
 atctccgtga atggcatcga cggaaggctc aatcacctgc ccttgggctg cgtcagtgac 240
 atggtcatcg tgaccatcaa caatggcaat cccgacctca cgaaaagggt catgcccacc 300
 atcatcggtc tccagccaca agcc 324

<210> 2679
 <211> 423

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-009-Q1-E1-B5

 <400> 2679

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 tagctgataa cttgtctagg ttagaaaata ttcttgacga tccacaacct attaattgata 120
 gttttcctga tgagcaatta gccgcaatta atgtttctca taacacttgc agcgacccga 180
 cctcggacgg tcaagtctct gtccttaagt gtcacccctg gatcggtatg ctgacacaca 240
 cagtactcga ggatttataa cagaggtaaa tcacatgtat aaactaacgt aaatactatt 300
 acctcaatcc aaatagcgga aataacaaca aggttggtga ttcccatcaa caccaacggc 360
 aaggttgagt gtggaaatcg taaccttaat gtatcattta ctcgtcataa gaatcctgca 420
 aca 423

<210> 2680
 <211> 366
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-009-Q1-E1-C3

 <400> 2680

 gggtcgacgg cgaacggaac cgccgacgca gctgccaagg aaagacgcat cctcccat 60
 tttcgggcaa cgatatggct ccgacaacgc cgtgatcttg acctaatagg gtgtattaga 120
 aagataagaa gaggacattt gcggatgtgt tttccactgt tttgtgcgaa tataatgtgc 180
 tgtgtttgta gcgaagagac ggagtacatg tgacgtccat cgacccctcc gtaatccggc 240
 tacctggaca gaggttgttt gtcctgatg taaagtgggtg ttccacgttt gattagttca 300
 ccgaagcgta ctattttcac tacctgtgat cagacgttgt agtatagact ttgctggtct 360
 gtgttg 366

<210> 2681
 <211> 392
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-009-Q1-E1-E4

<400> 2681

gggtcgacgg ctacggttga gacggggaca ctccggtttc gccgggaaag aaaggaaatg 60
acaacgcgca aagcatttcc aataccaagg tgaatgcttc taaagttgag caataggaaa 120
ccggtttctga tcatgaatgc aagccaaaat ctcataagac aagtccatct gccgccaac 180
ccaagatttc caagagttaa gaaaccaaac gatgaatatc atacaaacga cgaaaggaac 240
ataaggaatg aacttgatât caacaaagat gaataaaagg ctgctgtggt gaaggggggc 300
tattgtggtg aagaaggata gaaagttcta ttaaattgcca tagcagttac atgacctca 360
tcctgaaacg gatccagtga agatatttta tg 392

<210> 2682

<211> 439

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-E7

<400> 2682

cgggtcgacg ggcataccga agccatcatg cttgttgtga gaagctccgg tttgtgagaa 60
gtatataccc attaatggga caaagaattt accacggcat tttgatgccg ctccatgaga 120
tcatgccaag tttcatgaat ttcagacgag ttttgaattc accagaatgt aaaaactagg 180
cattccaatg ttttgtctggc aatcaacggt accctggtgt tggagattca ttcccagttc 240
ttgcagttga tgtcaacatg gatgaaagga aaggtggttg ggttggttcgg gcgatttttg 300
tgaaggaagg agagaagttg ttttaattgc cagggcagaa acattattct cctcctgaaa 360
gggatccatt gaggatattt tatgaatcgc tctatgagca agtgtccaat agtgaaattg 420
gtgcattttg ggttgaggg 439

<210> 2683

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-F3

<400> 2683

cgggtcgacg gggatcaaga gaccgcgtgg gaggccgaga aaggagagac cgccagaaga 60

aatgtctaca gaaactggag atgcaatgcc tgctcctgaa actggagatg cagcgctga 120
 tgaaaatgga gcagcaatgc ctggtgaagc tggagatgct tctccaactg gattcaagaa 180
 actgctggg aggccgagaa aggagagacc accagcatca atctctgctg aaactgaaga 240
 tgcaaccctt gctgaggctg gtgatgcaag gcttgctgaa actggagcag caacgcctgc 300
 tgaagctgga aatgctgcat cgacaggtat caagagaccg cttggaaggc ctgaaaggt 360
 gaagaagctt gggaagccaa gaaaggagaa gccggaagca gcaatatctg gtgaaaacgg 420
 agatgatgct gcagcagcta tatt 444

<210> 2684
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-009-Q1-E1-F4
 <400> 2684

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 aaagtcgaac aactatttta gccttggtgc aacagttcct tgggtgtggtg ccacgtttta 120
 atgcgaagaa gaggtcggcg tgcatagaag gctcgcggat ggcccttgcc cgtgtcaaaa 180
 catactgggt ggagatggat gccaccactg tcgcggtgta nggttcgacc ataggccgag 240
 tggcagccga gcactatttt gaagaagttc ttgaaggcgc tccttcgata gaggcccaat 300
 gctcgaagaa tgttatgttt gagtgacatg taatcccatt gtaacgtttt agtgaattta 360
 tcaaagctgt atttatactt tttcccgaaa gtattgtgat g 401

<210> 2685
 <211> 423
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-F8
 <400> 2685

ccgggccgac gggcgacgat aaggcgctcg aagcggccgc tcggcgtggt gatggcgtgg 60
 gtgcgggcgc agccgcccac ggtcaaggcc ttcctcgccg tggtcaccgg catggccgcg 120

cttgtcttca tccgcttcat cgtccacgac cacgacaacc tcttcgtcgc cgccgaggcc 180
 gtgcacgcgc tccgcatcgc cgtgctcatc tacaagctca ccaaggagag gacctgcgcc 240
 ggactatccc ttaagacca ggatttaact gcattgtttc tagctgttag actatactgc 300
 agctttgtca tggaatatga catccataca gtgttagata ctgctacact tgtggctaca 360
 ctttttgtta tctacatgat tccggttcaaa cttagggtcaa cttatatgct ggacaaggac 420
 aac 423

<210> 2686
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-G6

<400> 2686
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 acgacgcgac ggcttgcgct ccgcagcctt ggaaaacccc ttctctccac cacgacgcgt 120
 cggcatggtc gccgccacct cctccgacga accggccgag aaagaaggcc cctttcgaac 180
 cctagcttcc gactcggggc gattcagact ggggaggaga cgacgcgcgc tcttccatct 240
 atagggagcg aagcctagtc ggtgtcggct cgctcttggg ctccaactag gcttctcgtg 300
 ccacgccggc caggtaagcg cccgatgcgg cccggccagc ccagcacca gacgcacgat 360
 tccatcctct cgctgaaga gacgttgtaa tgggccagcc cagtagcact ttttgttcag 420
 ctcatTTTTT ttgtccgc 438

<210> 2687
 <211> 438
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-G8

<400> 2687
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 aagttgagct atttgtcaa gcacgtgatt gccttctccc aatgggcctt acctccgaga 120
 atgttgacac gcggtttggc ataacacgca tggagcaaga tcaagctgct gttgagtctc 180

acaggaaggc agcggcggca gttgctgctg gtaaatttaa agaagaaata gttccagtta 240
 atacaaagat cgtggatcca aaaactggtg aagaaaagga gattgtggtc tcagcagatg 300
 atggaatccg gtcgaatacc acactggcag tctgtcaaaa acttaaacca gcattttcca 360
 aggacgggac cactactgct ggaaatgcta gccaaagtaag tgatggagct ggatctgtcc 420
 cactaatgag gcgagatg 438

<210> 2688
 <211> 413
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-009-Q1-E1-H2
 <400> 2688

gtcgacggca catcatatat ttaaagaacg tcgaacgtgt atctgaaaaa tgtttgacgt 60
 ctgctctaaa aatgcatatt ttataccgag aaatagtgat aaaacagcac acctatatca 120
 acaaacgatc caatcagata accagagaaa caaacagtaa ggaaacaagg ataatcaaag 180
 tatagcatac agaagatgaa aacaaatggt cacatcgatt aaattgattt gtagttccat 240
 taaaatttgc atgtgacatt tttggaaaca atcacatggt tccaaacaaa tccatgaaga 300
 aattcaagta gattttcaca aagaatacaa atgttcctgt agtttttgtc ttaaagattg 360
 attacttcca ttagcatata aaacttatgt ttgggaaatg ttgccatgta tgc 413

<210> 2689
 <211> 399
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-009-Q1-E1-H4
 <400> 2689

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 aaatccgagt ccgaagatca ccagaggaaa gcgtccgatg cagaggccca tgtcaatgcc 120
 ctgcagaagc aatctgaaga gctgctcttc gactacgacc ggctgctgga ggacaaccag 180
 atcctgcagt cccagcttca ctacaaaggc tgaactgggt gacccgcggc atgtagctat 240
 ctogaactcg aagcgtcat cgccaaggct cttgatgtgg tccttggett tcattccct 300

ctctaactta tggatgatg gatggatgta ctctgtgctc tgtantttgt tttgaagcac 360
tgaaaagtca gggatggatg gatggatg ggagaaaga 399

<210> 2690
<211> 426
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-009-Q1-E1-H6

<400> 2690

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aaataattta tctaccctat gttattattg tgtttttatg ttttaattag tgtttgtgcc 120
aagtaaagcc tttaggatct tcttgggtga ttattgtttg atcttgctga taaaaacaga 180
aagtatgctc tctcaaaaat aattttcatt ttttaccaga gagcgataaa ataccaattc 240
caactgcagt agatcaatat acaaattatt taggtccttc taattttttt ataatttttg 300
gagttacaga agtattcgaa acctccagat ttctacagac tattatgttt tgacagattc 360
tgtttttcgt gtgttgttta tttattttga tgaatctata agtagtatct ggggtatgaa 420
acatag 426

<210> 2691
<211> 390
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-A1

<400> 2691

gggtcgacgc caagaaaggc ttctatcaat gtatcatcag tatcaatcac tacatgacac 60
cacacaacag atatgctgct gtcagcagtc ctctctaaat agacactgca attatcgtat 120
aagtacatca ttgctgctgt cagcagtgct ctctaaatag aactgcaat tatcatgtac 180
atcattgctg ctgcaatgaa ccattaagaa ttatttaaaa tctagcctac catctgcgtt 240
gtcgtcaaca gagggttgag ggggagttac aaaatctgta tgagaaaccg agggattgtc 300
cgagtcagcg acatctttgt tatcttcaga gctgtcagaa gcagctgaga tggcgtcacc 360
tgattctgaa tgtgttctgt ccacatatgc 390

<210> 2692
 <211> 427
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-010-Q1-E1-A10

 <400> 2692

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 tccttgccgc tgccttatt gtggccacaa gtgccaatct aggtgccttc gaaaaatgga 120
 ccagttttta ggcaacccat aacaaatctt acaacgttat tgaagacaaa ctctgtttcg 180
 ctgtttttcca agacaacctc aaaaaaatcg aggaacacaa tgctaaatac gaaagtggag 240
 aagaaacctc ctacttggct gttaacaaat tcgccgattg gtccagcgct gaattccaag 300
 ctatgttggc ccgtcagatg gctaacaagc ccaaacaatc ctttattgca aaacacgtag 360
 ccgatcccaa tgtccaagct gtagaagaag ttgattggag agatagtgcc gttttgggag 420
 tcaaaga 427

<210> 2693
 <211> 328
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-010-Q1-E1-A11

 <400> 2693

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 gccctgcttg tcatgaattt attctaacac agctatatcc ttcatacgt aaattaacag 180
 atagcttaaa attggacctc gtgccctttg gatggagtga atcttcacgt agcgcaaatg 240
 gaagagtatc atttacttgc cagcatggtg atgaggaatg ttatattaac agaatacatg 300
 cttgtgttct tgatcaaaat ccaacctc 328

<210> 2694
 <211> 329
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-A3

<400> 2694

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tatcataacc tgaaagccag gtgccatgtt tttgtgctg tgctccatct gttgtactag 180
catgctccag ggtaaagggt tacggcatgt ttttgcgatt attaaaatgt tttcgactct 240
gatggcatcg tgaacataat actggctgtg gagttacaat ttccctgtca atacaaaaac 300
tcctgggtat gtgtaacaca gatacaaac 329

<210> 2695

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-A4

<400> 2695

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acgtttggca ggtaaaatcc ggctcagtat ttgacaacat tctcatttgc tatgaccg 120
aatatgcata acacgttgcc gatgaaacat ggtgtgcaaa taaggaagct gaaaacgaag 180
cttttgaaga agctgaaaag gatacgaaag ctagagaaga taaggaagct caacaagcaa 240
gggatgaacg atagcgacgg acgagagaga ggggtgatcg acaccgtggt atggaccatt 300
acaaggacag atacaaaata cgcaacagag atcactggga tgactaccat gatgagcttt 360
gaagccccc aaaatcttca attcttccaa ggagaaactg ggttttgaca cagacattgt 420

<210> 2696

<211> 390

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-A5

<400> 2696

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actgagccaa aagacaaagt gcacgtgagg gtgcacatat accaggatcat gtcaacttgc 120

tttggttttg ggggtcgtca ggtcaacttg ctaacttaga cggcttgcct accttcctat 180
 ttttatcttc tgagtatcta cctaactctg tttgaaggcg attaattaga agcctctatt 240
 tattttaagga caccaatatc aatctgacat cagatttagg aggggactcc ttaaaattag 300
 gctttcacct cattttataa ataatcaat catcaggtagc aggatcaccg agataaccaa 360
 atctgctagg gcatcagcac aagcacaccc 390

<210> 2697
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-A7
 <400> 2697

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 aaggatggat caggcagtgt tgagttttcc gtccttggtg cggatggttc aggttgatcat 120
 ccttccggtg aggatgttca agatgagaga atcacagtga ctgatgatgt acgaggggat 180
 gtagagttga tcccactgat gaatacgaac agaacagttg ggtgatcatc tttttcgtaa 240
 gagggttgat tcatgattca tttacgccac gatcatctga ttatacgcgt cggtagctgt 300
 tgctaggaat gtacataagt tcttaccgcc tgtttagctg tagttttag acgttaaadc 360
 aactgattag caactgaagc atacattttc ttcgttcttt cgtttttgcg 410

<210> 2698
 <211> 414
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-010-Q1-E1-B1
 <400> 2698

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 agctggaaaag ttcggactct ggaaaccagg ctagtgcagt tcaactgcca gattctgata 180
 tgactgaagc taatggccga aagaaatatt ctcgtgattt tctgctaact tttgcacatc 240

agttattctag tcttcctgtt ggcattcaga tggatactgt cactagtacg ctattcaaag 300
 atttggcagg aaaatcctat gttattgatc gggaacctca cccaagttct gcaaggggat 360
 ctgatnagac aacatctcgt ggtgatcgcc gtggctctgc tatggatgat gata 414

<210> 2699
 <211> 378
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-B10
 <400> 2699

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 tggagaggga acaactaccc gttattggga ttgttcgaga ccttcctgct catggagggg 180
 aaacgtacat acacctagcg gagtaccagt tgcctcatgc gatagatctg gagtgaacag 240
 gggttgatgat aatgcaaaat cagggttgtga ggggtggcggc agtgcttaca tgtgcaacag 300
 tcaacaacca tgggcagtaa atagcacttt ggcataatgt tttggtgccg cgtctttcag 360
 taacgggatt gatgtttc 378

<210> 2700
 <211> 376
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-B3
 <400> 2700

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 ttacaattta ccgaattccg gtttcgggaa acacaatatc atccaggcaa aaaatttaac 120
 gcaaagtttg cgatgtaacg caccaaagtc aggagcggct accataagaa gcatatatac 180
 catgtctggg tcatacttca gcacatctaa aatacttcca ctgccacac gcattgtgca 240
 gcagatgcaa tgcttggttc ctacttcac aaatccaata aacttcgact gctccggagt 300
 gaataagctg ctctccacta tcgaaaaacg gtcctcgcat gacaaatcac ttccttgttt 360
 aaaactccat gctttg 376

<210> 2701
 <211> 446
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-B4

<400> 2701

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 cgtgcttggc gagctcgccg gggaggacga cgcggacgga ggtctggatc tccctggacg 180
 tgatggtggg cttcttgttg taacgggcga gcttggccga ctccccggcg agcttctcga 240
 agatgtcgtt gatgaaggag ttcattgatg acatggcctt ggaggagatg ccgatgtccg 300
 ggtgcacctg cttcagcacc ttgaagatgt agatcttgta cgtctccacg cccttcttcg 360
 ccttgctgcc cttcttcggg cccctcgtct tgccctcgcc gccggcggcc tccttggacg 420
 ccggaagccg cttctcggcc ttgggc 446

<210> 2702
 <211> 392
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-B5

<400> 2702

gaattgacgg gcctgctcca gaaaatttgc atggtcagga tttaatctgc acagatgagc 60
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 cacctattgc tcttagttgt ggtgctcctt ctacatttga tgaaaaactt gattctgttt 180
 taagtcagcc atatgaccaa aatgaatata aagagcttat gagaaaagcc actgaccaga 240
 agcctgtgag cagacaaaga caattgcgaa gtggatccaa gcgctatgcc acaggattcg 300
 ttggactgtc gtatcttgat cactaccag atctggccaa gcaaatcgac actgctgaca 360
 ctaatgagag acgactgaac ctctgcgaa aa 392

<210> 2703
 <211> 402
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-B6

<400> 2703

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tcaggattta atctgcacag atgaccatgg acttgtacct tgtactgaat cttctgattt 120
taacgcatct gaagaatgtg aagatgcacc taatgctctt agttgtggtg ctccttctac 180
atttgatgaa aaacttgatt ctgttttaag tcagccatat gaccaaagt aatagaaaca 240
tcttatgaaa aaagccactg accataagcc tgtgagcata caaatacaat tgcgaaatgg 300
atacatgcgc tatgccacat ggattcgttg gtctgtcgta tcctgatcac tatccagatc 360
tggccaatca aatcgacact gctgacacta atgaaagacg ac 402
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<210> 2704

<211> 372

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-C1

<400> 2704

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ttggccgtgc tgaagacgaa gagcattcca gtgactttga gccagaagaa aatggtgatg 120
gtgctgagga cgaggagatt gaggatgatg atgctgagga tgggtgaggat tctgtcaagg 180
cgcaatcctc ttcgaagagg aagaggtctg gcgcggagga tgaagatggt gatgacgggtg 240
atgatgatgg tgatgatgat gagaagcctc catcaaagcg atagtcaatt tgttcttgct 300
gatctggtat cttttctgct tgggccaaga aggaaaataa tcctcacgga gaaggttggt 360
ggtaaagtgt gt 372
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<210> 2705

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-C10

<400> 2705

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 tggagagggga acaactaccc gttattggga ttgttgcaaa ccttcctgct catggagggg 180
 aaacgtccat acacctagcg gagtaccagt tgccatcatgc gatagatctg gagtgaacag 240
 ggttgatgct aatgcaaaat caggttgtga ggggtggcggc agtgcttaca tgtgcaacag 300
 tcaacaacca tgggcagtaa atagcacttt ggcatatggt tttggtgccg cgtctttcag 360
 taacggagtt gatgtatccc tatgttgccg ctgtttctta cttagct 407

<210> 2706
 <211> 392
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-C12
 <400> 2706

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 tatggccgag ggacaactat tgctgtcaga tataattgac gaatcaaacg aaataattaa 120
 atcagaaaat gttatgtcga tggaaagggtt acctataaat aacaattctg gtcaaagtta 180
 cggctatatt gtctatagac agtataatct gtatctggca gccaatcttg tactaacaat 240
 atctggatac gtgagagata cagtacttgt tttattaaat ggagagctgg tatcacctgc 300
 acctgtcaac gaaaagagca tcgaaggatt cggcttctgg aagctctaca actctaccct 360
 aagtctacgc aataaagaac ttcaaaacgc ta 392

<210> 2707
 <211> 411
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-C3
 <400> 2707

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 ctgtacggag ctactctagc taattgctcc cactttcaat atgtatccag attgagactt 120
 acagtcactc ggatctgtgt caaaacttgt atcgacgtaa ccctttacga cgaacctctt 180

gtcacctcca taatcgagaa acatatcctt attctactaa ggatattttt gaccaatgcc 240
cagtgatcta ctcttagatc actattggta gagtatacaa taggtctggt ccatagcatg 300
gcatccatgg atcctatctc agatttcatg gcctctagcc atttcgcgga atctgggctc 360
atcatagctt cttcatagtt cgtaggttta tcatgggtcta gtaacatgac t 411

<210> 2708

<211> 387

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-010-Q1-E1-C4

<400> 2708

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gtttctcact gtcttctatt cctaattcaa ttgcttctca aatagtttgt gtagactgta 120
tggtttgatc attcacctga agtgactttg ttgcactttt gatgattttt tctgtatctg 180
aacttttgaa ttttgtacga atgtgaaagt cttgcaacca aaataaaagt acagggatcg 240
tgtgcaattc aaaaaaaaaa ataataaaaa caaaaaataa aaaaaaataa aaaaaaaaaa 300
aagaacgggc gcacaaaagg ataaaaaatt aatataaaca tacatatgaa gtgataccac 360
acacttagcg tcatcggaat tcaattc 387

<210> 2709

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-D12

<400> 2709

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taaagaaaag attcatatta acatcgttgt cattggacac gtagattctg gtaaactctac 180
tactactgga catttaattt acaaatgtgg tggatcgac aaacgtacca tcgaaaagtt 240
cgaaaaagaa gcccaagaaa tgggtaaagg ttcatcctg tatgcctggg tactcgacaa 300
acttaaggcc gagagagaac gtggtattac cattgatatt gctttgtgga aattcgaaac 360

agctaaatac tatgtaacca tcattgatgc ccctggacac agagatttca ttaagaacat 420
gatcactg 428

<210> 2710
<211> 433
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-D2

<400> 2710

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acttcaatca cataaaactc aacaaaacct tcgtgagatc cattagtata agaaaataaa 120
tcactactat aagtgttgta tcataccaat tcatatttta ttcttgcatl atatcaactg 180
tattccaact tttctatggc aaaaactcat caaagaaaac catagagcca tcaaaacatg 240
cacacaacgc aaataaaaca tgtcaaaaac agaacagtct gtagtaatct ggggtgtttct 300
aatacttatg taactccaac aactctgaaa atttaggacg gcctgagcaa tttgcatatt 360
gatctactgc aaaatgaatg gttattttat cgctctctgg ttaaaaatga gaattatttt 420
catgaacata aaa 433

<210> 2711
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-D5

<400> 2711

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cgcccccggc tctccaatcg cagttctggc tgtggttggt gacgtggcac ctgggtctgt 120
tcatcgcgct caccttcggc cagatcgggt tcaagggcac gaccgaggac tacttccaga 180
agtagcgagt taactagctt tggttcgtgc atgtgcgtcg tccttgggct gctcaagggc 240
tgcttctgcy catgcygtgt caatgtaaaa tctgccatgc cttttggttt tgtgcatgcy 300
tgtggcttgc caagccgtgt gattgctgtt tgtaattac ctcttccatg gtaagcacia 360
aagagttcaa catccccgct aagctccaaa t 391

<210> 2712
 <211> 374
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-010-Q1-E1-D6

<400> 2712

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 cgcgtagttc tgcattctgag aggggagaga aagagagaga gcatgggata ctgtatgtaa 180
 tgcctgggtc ggagtcgaa ctgggtgtag tctgtagcgt cgattgatct tgaatcaccg 240
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 catgtggctt caaaaagccg tgtgatctgc tgttatgtta gctacctctt ccatggatag 360
 gcacatcata gtgc 374

<210> 2713
 <211> 385
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-010-Q1-E1-D7

<400> 2713

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 ggagctgcca ttgccttctt acacttgccg gtggagctcg atggtgcgtc ctcgacggta 180
 gcgcagcact ccaaggaggt gcgcttgccg gagtaggcat cagggctctt accggacttg 240
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 ggcattttca gtacgttgta cgcac 385

<210> 2714
 <211> 428
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-E1

<400> 2714

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tatgtcgcaa gttaggcaat cttcacaaca tcccatgtaa tatgaataat aaaggggaga 180
acatagttgg cttacactcg ccacgtcaat caagtacata aataacatta catcatccaa 240
aacactcacg gcccgactac ggcgccaaaa tagaagaaaa cccaacatgc gacaatggtc 300
ccaatcacc ccaactgggc accactactg atcatcgga aaggaaacgt agtaacgctg 360
agagtcctcg tcgaactccc acttgagctc gtactcgtca cctggagcgg aatcaactgg 420
acctgcat 428

<210> 2715

<211> 424

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-E10

<400> 2715

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ctggtcaaga caaagccaac ccaccgcct tgctcctttc agccgtcatg atgctgaggt 180
atatgggcct taacaaccac ggcacaaaaa tcgaaaacgc ctgcttcgag accatcaagg 240
aagccaaata cctaacaggc gatcttgagg gcaaagccaa atgttcagag ttcacgaaca 300
gcatctgcga gaaaatagca taagtcctta aaggaaaaaa cgtcgcagtg accctcgcta 360
aagaagatag acgttattgt gttgagttta ataatatattg tacataataa gcacaacatt 420
tttt 424

<210> 2716

<211> 334

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-E11

<400> 2716

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tttgctggtg aaagacgata gaaatgctgg attccctggt gcgttccttc tgtcaaatag 180
attggaccaa cgaattcaag aagttttttt agatgccctc aagaataaga tacagacaga 240
agttaatgcg gaatatttca tgagtgatga tgatcctaaa tattataatg catggaagaa 300
gataatgaga catgaaccaa agagactatt atgt 334

<210> 2717

<211> 425

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-E2

<400> 2717

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aatatacgtg attctgtata cgtggaagga gaagagacaa catgtttgat gagagagctg 180
gaaaaacatg gacgagaggg gaaggatctc atgggttgag ggattgacaa ttttgtgcgg 240
ggggagagag ggattggtaa ttttgtgcaa gagagagagg gtgggggggag gagtcagtca 300
gccatcgtca catcaccctg ctccaaatg accccgcatt ctctagcgcg gtgtggctgc 360
cgtctttgat ctgctcgatg cctcctttga agattgatgt gttgtgcatg ttgggggtca 420
aagaa 425

<210> 2718

<211> 393

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-E4

<400> 2718

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gtggctgtaa taatacaact cagaaaaaaaa tgaattggaa agaaatacat cgcttatgga 120

aacagattcg agttgcacga agcggattga gcgttgacgc gcgcgctcgt gaaagagtcc 180
 tttcgttagt ttttaacaagg atgacgggca ccaactaaca gggagcagca caaacgacca 240
 atcagaactc gccaaatgaa ccaacgctcg acctgcgttt cgaccttaat gggtttatag 300
 cctgaattat agcaatactg agttcgccgt tgctcatttc agcctccata ttttccacc 360
 attgtgctca taacgatttt ggtggtccaa aat 393

<210> 2719
 <211> 376
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-F10
 <400> 2719

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 ttagaagaga aattcagtga tgattcctgg gaaaagaatt ggatatacag catacaccca 180
 gataaagaat ttgggaaatt tgtaggaca gctggaaaat tctttaatga tgacgaagaa 240
 gataaaggtc ttcagacatc tgaagatgca cgtttctatg ccttaagtag aaaattcaaa 300
 tccttctcca cagaaggtaa agatctagtt atccaattta ctgtgaaaca cgaacaaaac 360
 attgtttgtg gaggtg 376

<210> 2720
 <211> 246
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-F11
 <400> 2720

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 tagtgtaaca ggtaattcat aattcagtcg ttttctgccg cattacagtc acaacatgag 180
 atcaatgtgt ctgaggtgcc cataaatcgc caagtgtgag tctccataga tctccaggc 240
 cgtttg 246

<210> 2721
 <211> 431
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-010-Q1-E1-F2

 <400> 2721

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 accatagaga agttataata aagtagatat tacaccaata tgaatttaga atgagttcat 180
 tacagtacct aagtgggtgtt tttattttct tatactaacg gagcttacga gttttgtttt 240
 gagttttgtg tggttgaagt tttcaagttt tgggtaagga ttcgatggac tatggaataa 300
 ggagtggcaa aagcctaagc ttggggatgc ccaaggcaac caaaggtaat attcaaggac 360
 aaccaagagc ctaagcttgg gggtgccccg gaaggcatcn cctctttcgt ctacgttcat 420
 cggttaacttt a 431

<210> 2722
 <211> 287
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-010-Q1-E1-F6

 <400> 2722

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 tgatactgta tcccgttgcg agaaatactg taacaaatcc gtccgtggtg tacctagtta 120
 aattatcgag aagtgcatt agaaatggtc tgtggagagc tttggtaata aacggtgctt 180
 ctgtgcctgg tagaatcatc aaaaaaaaaa aaagaaaaaa aaaaaaaaaa aaaaaaaaaat 240
 aaaagaaaca caaaaagatt aaaacaaaaa gcggccgtac aaggggt 287

<210> 2723
 <211> 253
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-G1

<400> 2723

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atctaaacta tgagaaccga ttgtcgtgtc atctatttca tgtgacgcgc ctgccactgc 120
acagtggcgc ggtccctcat ctggggcagg aataacatgc ttcacatcatg caatgatccg 180
cgtatccatc tcgtaacttg tgtaggcgtc cttggacgca cacttgacat gttgtttatc 240
cagtctctca tgc 253

<210> 2724

<211> 412

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-G12

<400> 2724

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gtaataatat gattccaaat ggccatttcc acaaggattg gcaacgattc gtcaagactt 120
ggtttaacca gcctgccogt aaaattcgca gaaggaataa tcgtattaag aaggctcgtg 180
ctattgcccc taggcctgct gctggacctt taaggcctgt cgtaagggtg ccatcaatca 240
ggtaccatac taaagtagcg gctggacgtg gatttaccct ccaggaatta aaagctgcag 300
gtcttaacc cagatttgca aggactgttg gtattgctgt agatcacaga cgaagaaaca 360
aatcagtaga atcaatccaa ctgaacgctc aacgtcttaa agaatacaaa tc 412

<210> 2725

<211> 210

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-G2

<400> 2725

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taacttgtat aggagtcctt ggacgcacac ttgacatgtg gtttatccag tctctcatgc 120
gatataattgt gacaagcatt cttgtccttc gtgctcgtct acgctatctt catgtctaag 180

gggtagatta tggtcgtagt catgtccacc

210

<210> 2726

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-G3

<400> 2726

gggtcgaccg gtcagaacga tgatgaagaa gcctctctgc tcaccattgg cgctttccgt 60

gggaagtgat agcaatggaa gcggagctgt agctcttctg aaaattgcaa ggatcttttc 120

acaaatctat tcaagcctta agaccagaag caagttaa tttctctttg gattaacatc 180

tggctgaccc tacaattaaa atggaactag caagttccta gagcaatgat ctctggatgc 240

atgtatcaaa gcctccagag aagccttaca tcaagcaaat ctttgaggat ttttcggatg 300

tctccaagga aatgggcatt tcagtcgcac aagattaatg tgtcaaattc tagaaatttg 360

tgtgctatag ttgtatctac gaatcgaga ctacatgctg aaca 404

<210> 2727

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-010-Q1-E1-G4

<400> 2727

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gagagttggg gcaaacttcg ccggtgcatc caaaccat gatagcatat gctctatcac 120

acataagcct ccttatatct tcttcaaac agccaccata cctacctatc atggcatttc 180

catagccatt ccgagatata ttgccatgca acttccatca tcatcacata catgacttga 240

gcatttattg tcatattgct ttgcatcatc gtaagatagc tagcatgatg ttttgatggc 300

ttgtccattt ttttgatgct attgctacgc tagatcattg cacatcccg tacacagccg 360

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<210> 2728

<211> 423

<212> DNA

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 ctttgcattg cttgccctac gtaacagatg ctggacatct gacagattag cacggcatgg 180
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 cctcgcccaa tgtgtctttg caagggaggt atggtatgga cctggacctg cacggcaatg 300
 aacaaacaag agtggatacc aactggggat acacggctta tagagtgggtg cccaaataag 360
 ggtggaaaca atggagacgg aaaagatgtc cgtgccctcg tctacttgt taagtgggaa 420
 ttatggaaac at 432

<210> 2731
 <211> 387
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-H2
 <400> 2731

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 ccatgtgcta cagcctccat gtccatgtcc tccctttctt caggtttctac aggggagccc 180
 agggaagggt cagcagcttc agctgcacca atgcaaccat caagaagttc aaggacgccc 240
 tcgcgaagca ctgcgccgac aggtgcagcc tcggcccggc gcggggcctc gaggaggcgg 300
 agctcttggc tctggctgca aacagggacc tggaattcac ctacaacaac gagaagccgt 360
 cgctggtgcc gatcgccgag ggcattcc 387

<210> 2732
 <211> 270
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-010-Q1-E1-H8
 <400> 2732

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tcttgaatca ccgctgaatt gaagctggaa acttgatcgg ttagccaaaa taatcccggt 180
gataatacac aatacgtaaa tcctgtcaac tgtgtcactc agaaccggac atactactgt 240
tgttcctaata gataaagata aattgatccc 270

<210> 2733
<211> 426
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-011-Q1-E1-A10
<400> 2733

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atggggtcat ttaccttga agcttccgca gtagtttagt ttagatggcc ttcagccata 120
ttatttttgt gtaatcgtgt tctttatcag gactcgatgt aataagtgtg tgattgaact 180
cttctataat tcctcgagta ctgtgtgtgt cagcattatc gatccaggga tgacacttaa 240
gcacagagac ttcggttcat tgggatcgtg gtcgctacaa gatggtatca gagcttacgc 300
tgactgtagg acacgaccac tagaataagc cgcatagaatt ttcttctttg ctcatctcta 360
attctcctct aattctactc tatagatggc ggaccccaga aacaagtcca ctcaaccgga 420
tgacga 426

<210> 2734
<211> 400
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-011-Q1-E1-A11
<400> 2734

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ggtactgcat taacagacag ggactatang gactcaccag ctgtttacaa aggtgtcgat 120
ggtgagacta ccgttgtaga tcgtgtaatg ctttgttcgg atacaaatga caaattgacc 180
attaagtgtg ttatccgtca cactaagagg ccggagggtg gtgacaagtt tagtagcaga 240
catggacaaa aaggtgtttg tggcaccatt gttcagcang aagacttccc cttctctgag 300
aaaggaatat gcctgattt aattatgaat ccccatggat ttccaagtcg tatgacaatc 360

ggtaaaatga ttgaacttct tgggggaaag gctggtgttt

400

<210> 2735

<211> 278

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-B1

<400> 2735

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aacccccccc aaggcgcccc caaaattcat ttccggggcc tttttttaa accccctgtg 120
cgggaaaccc ccgggggttc ccacttata cccctggaa aaaaaccccc tttcccccg 180
gggtgctaga cgcaaaagcg ccccaatgt tttccctccc caaaatttcc cccccccaa 240
ttgtgcaagg gccccccccc tttggggcc attaaacc 278

<210> 2736

<211> 395

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-011-Q1-E1-B10

<400> 2736

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tcccactttc aatatgtatc cagattgaga cttagagtca tctggattgg tgtaaaagct 120
tgcacggttg taacttttac gatgggctct tttatcacct ccataatcga gaaacatctc 180
cttagtcctc actaaggata ttcttgacct atgtccagt atctacttat tagatcaaaa 240
ttgtattcct ttgccaaaca gagcaaggta tacaataggt ctggttcaca gcatagcata 300
ctttatagaa cctatgactg aggcatangg aatgactttt cattctcttt ctattttctg 360
caatggtcgg gtcttgagtc ttactcaact tcaca 395

<210> 2737

<211> 411

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-B9

<400> 2737

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gaaacaagtt ccggatgctg ctgggtctgc cgggtggcagc cactgtcaac tgcgctgaca 120
acactgggtgc caagaacctg tacatcatct ccgtcaatgg aatcaagggg cgcctcaaca 180
ggcttccttc cgcctgcgtt ggtgacatgg ttatggccac tgtcaagaag ggaaagcctg 240
acctcaggaa caaggtcatg ccggctgtca tcgtcaggca gcgcaagcca tggcgccgaa 300
aggacggtgt cctcatgtac ttggaagaca atgctggagt cattgtgaac ccatagggag 360
agattaaagg ttctgccatc actggaccga tttggaaaga ctctgccaac c 411

<210> 2738

<211> 352

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-C8

<400> 2738

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cccatcattc ctcatgtcat tcgtgcattt atcagaattg aaaagattac aggaaaagaa 120
acactctttt tgcgtgtttt gaaaaaacga accatttcct atcacgcacc tctccgttgc 180
tcactcttgt tgagtaatga cgatatgaaa aatgttttga attttcattc agaggatatt 240
cagtattttc ttcgtccctt ttagtcgcct ttttcacgaa tatgtccctc gctttgttag 300
caagattagc ccagttgcgt gagttatgaa taccgacagt aaccggttag tg 352

<210> 2739

<211> 419

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-C9

<400> 2739

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caaagcaatg gtcaccgtgt agactggcag taagaagagc caaatggctg gcaattgttt 120

tctaaggtga agttcttcta ggggaggttt caactgCGgt ggtagctcgg ttaaagactc 180
 tgtgggttaaa tggtaagtga gctctgaagt ttactgcac aaactgaatc attatgcagt 240
 gatcaacaaa gtgagggttaa gaggcaaaact agatgtcagg ggagtttatg ttaggaagaa 300
 ctatagtcct gttaattttg agatgattag gaaaagtatt ttatacagtt gctttacaac 360
 tagataaaact ggtctagaga cataaccaag aagaagcact cacatagtgt gatggatta 419

<210> 2740
 <211> 379
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-D12

<400> 2740

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 tctaccgga aacgtccgat tagctattgt gaagctatgt gcattcctca atgcaatctc 180
 tcagaagggtg atcgatccag aaatcatacc aaggctaagg agtgatgtgg tgcaatgtct 240
 tgtcagtttc gagctggtgt tcccaccatc cttcttcaat atcatgacgc acgtcctaata 300
 tcatcaagtt gacgagattg tcattctggg ctccatattt ctacataata agtaccctt 360
 tgagagggttc atgggagtc 379

<210> 2741
 <211> 381
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-D9

<400> 2741

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 caacagccat ggcgaggagg cctggcatga ggagttggag ctgggcgtcc atggcgaact 120
 gaaggaggca acgaccctgg ctcttcgaga tgacagacgc ggtgggcatg aggttcaacg 180
 agacagagat ggccggatcc tgcgagcagg cgtcggagag ggccggattt ggtgtccgga 240
 ggcgctctggg agctccggcg tcaaaggaga actacaggac gccggtgctc gctggaggcg 300

tccattgcat gggcgtgctt cttcctacac aattaggaga ccgggaggaa tgagagggac 360
cagggtggta gggagaggag g 381

<210> 2742
<211> 426
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-E11

<400> 2742

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gcaactgcaa tcacgcaact gaagaagtcg aaacccgagg cgaagttggc gaacatgaaa 120
gctgacaaac ctaaagtcg gtgataggtt gttcgctct gtcgcgccgt ctttgaactt 180
ggtggagacg cataagcagt ggcagagcta ggatcaagcc acgacccggg caagccccag 240
gccaatcact tggtagcagt ctaaagcagt taaaatccac tacagtaaac gaaggagcca 300
agcctcagga cccaggacgc cgcccgaca gcctggggct tgtctccgcc actgcgaga 360
aagagaacgg tggcgccgtg aagaccttga cgactgctgc catgaccaca accattatga 420
tttgtgt 426

<210> 2743
<211> 432
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-011-Q1-E1-E12

<400> 2743

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atanggtgga atggaatatt ttgaggagaa tgatgacacg cttgggcttt catgtagagt 180
ttgtaaatct gttgatggca tgtgtccggt cagttaaata gaaggtaga ttcaataatc 240
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atatgttttt gatttgtgca gaagggttt ctagtcttat ggctcataga gaggaggttc 360
ctggcattga aggtgtcacg gtttgcagaa atgcaccaac aatttcacac tttttttttg 420

ctgatgaact gc

432

<210> 2744
<211> 405
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-E3

<400> 2744

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tgctctttat tgctttcaag tttttttctc gtgtcaacat agaacaacag gagtgttgty 180
cgaatttttg tgatttttcg gggttcgttt ggacatgttt atgcattaac tgagttttca 240
atgcatttat gtgcataatt caaatttgaa ctacatgcgc atgctccagt gcatataaat 300
tggttgaaaa atcaaactcg tgtccttggg tgcattgcta agtcccatgc aagaaatggg 360
aatgaatttc aaacaccagg gcaccgttga ttgccggcaa aacat 405

<210> 2745
<211> 414
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-F10

<400> 2745

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aataagaaga acacagttga taagttatct aataatagga agcccatgat aaatgcaagc 120
cgagagaaaag ttgttacct tctctccagt tgcttcata ctgaggatta caaagatgag 180
ttgaggcctc tttgtaattc tatgttgagt ggaacaataa attcctttag gaccagaata 240
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ttcaaggata agcctgatgg gacagtggga atgcaatatg gagaccaga agatttcgac 360
aatcggaact cacatgaatg tacactcata ttaccacca agttacatgc cgac 414

<210> 2746
<211> 423

<212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-011-Q1-E1-F12
 <400> 2746

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atatagcatg gagcaatcaa aaattataga tacgttggac acgtatcacc caacatatta  180
ggactaattt tatagccaaa gcaaattacc atgttgttct aaaagactct caaaataata  240
taagttaatc ataagagatc aataatttct ataaaataaa accaccaccg tgctcttaaa  300
gatatacgtg aagcactaga gcaaaattat ctagctcaaa agatataagt gaagcacata  360
gagtattcta ataaattccg attcatgtgt gtctctccaa aagggtgtgta cagcaaggat  420
gac                                                                    423
  
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<210> 2747
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-011-Q1-E1-G8
 <400> 2747

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gctggcaatc aacggtgccc tagtgtttga aattcattcc catttcttgc atgggactta  180
agcatgcacc caaggacaca tattgatttt tcaactaatt tatatgcact agagcatgtg  240
catgtagttc aaatctgaat tatgcacata aatgcattga taactcagtt aatgcataaa  300
catgtccaaa cgaaccccg aaaaacacaa aaattcacac aacactcctg ttgttctatt  360
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<210> 2748
 <211> 429
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-H1

<400> 2748

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gcacagctca caaagttact tgggggctct ttgtgtaaag taacaaagag tttgaaagga 180
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cacacgaaa 429

<210> 2749

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-H2

<400> 2749

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agccggctgc cgcggtagaa tactccggcg gtcgataaga caccgcgggc aagaagccca 180
aggccgagat gcggccgtcc aagtctaacg agggcgggcg cgacaagatg aataagaagg 240
ccaagaagat cgtggagacg tacaagatct acatcttcaa ggtgctgatg caagtgcacc 300
cggacatcgg tatctcctcc atggccatgt ccatcatgaa ctcttctatc aacgacatct 360
tcgagaagct cgccggcgag tccgccaagc tcgcgcgcta caacaag 407

<210> 2750

<211> 389

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-011-Q1-E1-H8

<400> 2750

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gaataaggag tggaaaaacc taaacttgag gatgcccgag gcacccaag gtaatattca 120
aggagacca agtgccccgg atggcatccc cctctttctt ctaccaacca tcggtaaatt 180
acttgaggtt atatttttat tcatcacatg atatgagttt tgcttgagc atcatgtatt 240
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atcttttgag ctaggcagtt gctctagta 389

<210> 2751
<211> 427
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-011-Q1-E1-H9
<400> 2751

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gttggggctc aggttgata ttcgaagtat gctggaatgg aagtggagtt gaatgattcc 180
aaccatctga tcctaaaaga ggacgatatc ataggtattc tggagacaga ggatgtgaaa 240
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ggcaatt 427

<210> 2752
<211> 340
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-012-Q1-E1-A2
<400> 2752

gggtcgaggg cggagtcaac agtaacgtct ccacgaagtc catagttatc atctcagcgc 60
aggatcgga cactccgcct caatcaagtg gtattaggtt tcaggttgct cggtgagagt 120

ttctagtttt cggagattag atatattttc ttacctagta gccagaata agccatacaa 180
 caaagagtta tatccgttca tcctttatcg aagcgagtct gagcctttgc aattttctaa 240
 tcattgcttg catagtgtga attatcgggt gcacccacct gtaagttgct ggtcttatcc 300
 tcgaggatct ttaaagtttc gagttctggt cacattagtc 340

<210> 2753
 <211> 372
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-B1
 <400> 2753

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 gggaggtaat gcacgagcgg accgtcaagg cggcaacata cggatacctt gcccccgagt 120
 tcatttacag gaacgagctg acaacaaaga gcgatgtcta cagcttcggc gtgctgcttc 180
 tagaaatcat cagtggccgt cgcccaacgc agtcggttga atctgctgga tggcagacaa 240
 tattcgaatg ggcgacgccg ctgggtccat cacaccggca tctggagctg ctggaccgc 300
 tcatcaacga catgccggag ataggagtga tccagaaggc cgtggacctc gtctacgcct 360
 gcaccagca tg 372

<210> 2754
 <211> 96
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-C4
 <400> 2754

ggtcgacggc ggaggtatac tcagctttac tcagccgcc cttgttgtct tgaaattttc 60
 gatttactcc cttatggccg accaaaccca tcccct 96

<210> 2755
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-C5

<400> 2755

cgggccgact cgagtggcac cgtcttgaat atgatgacga ggtagaggag cggttgacca 60
tcatagctca gatgtcctcc ttgagagatg ccatggatgt gtcgaagtag tcttttgtac 120
gttgctcgga ttgtcacaag tcggaagcaa gtaggtccat gtggttgcc aatgcttcat 180
tgccttgatg taaagctctt tgcgggcca gaggtgggtt ttagtgacgt agttgttcgg 240
gtcctcatct tgctcgatga agagtgggtt ggtagaagta cttggcctat ccatcattcc 300
aagtaaagtg tgagtgggag aaagagaaga actatacaaa atgtaccttg accgatgttt 360
agtatggatc aaagatcact caatgatgtt gcaagggaaat tac 403

<210> 2756

<211> 399

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-C7

<400> 2756

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acaatgtttg agagataaac caattgacag attaataatta gatcgagttg tcacccttct 120
gttgtcattg ttagggttgg ggggtggagg gagagaaaga catatcgaga gtgtgcgcgg 180
taggcacaga cgcacaacta gcgagtgtgt gtatgtgggt gtgtttgaaa gaggagtaga 240
tagattacga tcaagatcga ggtgccatcc ctacgccatc ggtgtcaggt actgtgtgtg 300
tgtgtgtgca tgtgtgttag agagaatcga ctcgatagag gactatcagg atcgaggtgt 360
cacccgactc gttcgggtgc cggaagtgtg tgttcgggtg 399

<210> 2757

<211> 389

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-D2

<400> 2757

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ccgacctttc gtcaccctt ctctccgcc ttcccaattc cccaattcgg agcgccccgag 120

gaattcggcg tegatccgac gcgaccgaat tegtcccgat tcagctgctg ctcttggttc 180
gtccgtcctg cgggcccggc tctttgtctg tctcaactcg atccacgccg ttgcggcacg 240
cttctccct gcggggtttg gcctgcaactg atctggcctg gaaatactcc tactctagtt 300
tcgaggattt ttgtgttcgg taccatttct cggttttccc agtgggtcgt gctgatctct 360
gtctctgtgt actatcttct cctggccccg 389

<210> 2758

<211> 302

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-E8

<400> 2758

cccaatagtg acgtcgtatt agggcgccgg cgaccaatga cgccggaggc gaggggaaca 60
cgaggggcag gaagaatggc atcaaggcca ataaggcgt gtagacgtag aagatctaca 120
tcttcaaggt gtcacatcac gtgcacccgg acatctgcat ctctccaat gccatgtcca 180
tcatgaactc catcatcaac gacatcttcg agaagctcgc cagggtattcc gccaatctca 240
cccgtaacgc caggaaaccc atcatcacgt cccgggagat tcagacctca gtccgtctcg 300
tc 302

<210> 2759

<211> 252

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-F2

<400> 2759

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gtttgggatg ttgaataaga cgatgggaga tgtgccacgc tcttatatgc caacgggacg 120
ttgacgcgga aaaacatgct gctggacagg aagaagtcag tgaaaattgc cgactttggc 180
gtggccccctg tgcaggcgct cgacgacgac aacattatgg gggacacggg cactctgggg 240
tatatggccc cc 252

<210> 2760

<211> 413
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-012-Q1-E1-F4

 <400> 2760

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 tcgagtacat agatgaagct aaagcttttag cagcaaaaga ggaggcacgc aaaaaagcgg 120
 aagctgaagc cgcattcaat aaagcaaact attgggaaga attattgaaa gacagatgca 180
 ttgagcaaga agtagaagaa attgctatgg gaaaaggaaa aagaagccgc aagcagatgg 240
 ctgctgctga tgaggatgac attactggcc tgcacgagtt aagttctgaa gacgaggatt 300
 actcctatga tgatgatgtg tcggataatg acacgagttt accagcaaact gtttctggga 360
 ggaaggctca gtattctaag aaaaactcac gtaatgtaga ttcactccct ttg 413

<210> 2761
 <211> 430
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-012-Q1-E1-G2

 <400> 2761

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 ctgattccta tgttgaccct gaacacaagg actatggagc cgagctgttt gtgaacgggg 120
 agatcgcca gagatctccc gagaggcaga ggagggtgga gcccggtgccg cagagagcgt 180
 cggacaggcc gaggtacaac gacaggaccc ggtacgcgcg gcggagggag aaccagcagc 240
 agcagcgatg atccatcaca cgaacgaggc cgaggccaga gccagaggca acctgctgtg 300
 cctgtttcac cccctcgaca taacgagtac ttgttattgc tttggtttta gtaatccgtt 360
 tcgtgttgcc actctgttat ctgtatgtat ttgaccactt gggacttgag actaagaatc 420
 ttgatagcat 430

<210> 2762
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-G4

<400> 2762

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gatgttccgg agggtagagc agcagttcac tgccatgttc aggaggaagg ctttcttgca 120
ttggtacact ggtgaaggca tggacgagat ggagttcacc gaggcggaga gcaacatgaa 180
cgacctcgtc tcggagtacc agcagtacca ggatgccact gctgacgagg agggcgagta 240
cgaggatgag gatcaggagc ctgaggagga catgtaaggt gggatgtcca tgtcgtgctt 300
tgctgggtgg gggttctggg ggcagagttt gatctgtttg gtgctttgtt ataaatctgt 360
ttatcatcgc aactaccgct tgtacgccac cgccattctt cctgcctttc ctaagctc 418

<210> 2763

<211> 422

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-G6

<400> 2763

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agcaggaaga gcagagattg aagaagcacg acggccgttg gatggccatc caacagtcac 120
tgcttggtgcg tcaacctttt ttttaggaaa gcctcaaadc tgtggaaaac tgcatacagc 180
ccatctacca ttattttctaa taatttacag cccatttgct aattattaag gtttttttgg 240
agcccgtatt ctttttggtta gcattacagc ccatattgtg gccacgggta aaaaattata 300
cgaaattttg catatttcgg tgcagtccga actgttttta atcccgaat ttcgactcac 360
agtcaaactg atttttaaaaa taaatgtata tcaatataaa atccaacaaa ttctccacgc 420
at 422

<210> 2764

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-012-Q1-E1-G8

<400> 2764

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 ccgcttgccc gtgctgaaga cgaagagcat tccagtgact ttgagccaga agaaaatggt 120
 gatggtgctg aggacgagga gattgaggat gatgatgctg aggatggtga ggattctgtc 180
 aaggcgcaat cctcttcgaa gaggaagagg tctggcgagg aggatgaaga tgatgatgac 240
 ggtgatgatg atggtgatga tgatgagaag cctccatcaa agcgatagtc aatttgttct 300
 tgctgatctg gtatcttttc tgcttgggcc aagaaggaaa ataatcctca cggagagggt 360
 tgttggtaaa tgctgtagct ttaggacatc tgtggtagggt gtagcagctc gaacttgagt 420
 ctacccat 428

<210> 2765
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-H2
 <400> 2765

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 catgcgggtca tggactggca ccattattgg cctcacaat actgtccatg aggggtcgcat 120
 ctaccagctg aagctgttct gtgacaagga ctaccctgag aaggcaccat ctgttagatt 180
 ccattcaaga atcaacatgg cttgtgttaa tcacgagact ggggcgggtg acccaaagaa 240
 gttcagtttg ctagcaaact ggcagcggga gtacactatg gaacatgtct tgaccagct 300
 gaagaaagat atggcggcga cgcagaaccg caagctagtg cagcctccag aaggacatt 360
 cttctagcgg ggtgtttgct ggcccatctc cagttccagc agcagctatc tatgtcactc 420
 ccatgggatt 430

<210> 2766
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-012-Q1-E1-H4
 <400> 2766

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ctgtctggga agttccgcag gagtctgcca gcaatcatgg cctccttctt ggactttetta 120
cagcgccttc ctgtctttat tggatgatgac gacgaatgcc agccgtccgt cagaacatgg 180
atctcaatct aggcgcttag tcgcttctgg agggatttat gtggacttcc aatcatccag 240
tggttgacat tacagagatc tcgtgggact tgcattcatc ttggatctgg agactgcaca 300
tatccagtgt gtactgctga cagcttcacg tgggtgctga gatgcgcggg tttctgcaga 360
ccaggcaaaa gcgggtgggtg ctgctgttgt tgtggaaacc g 401

<210> 2767
<211> 428
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-012-Q1-E1-H6
<400> 2767

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ataagatgtc tcaaacggca acacattgtc aaaacaacca tgatataata tgacaataat 120
ggtatctcgc tagccctttc tgagacggca aacataaat gtagaggacc tccaaagtcc 180
aagtagcgac taaacattgt aattcattgt agaaaagatc cagtcattgat gcacccaaca 240
ttagctacac acaatgcata aatcatgacc gctgtgctct actcagtttc tggcgcttgt 300
tttagaatgt gatgacacaa cataaaacta aatagatagt cccttcgcta gaggggaagca 360
gtgatttgca gaggtgctag agatcaattt ttanaacaga gataaatgta attttaagac 420
atgcacct 428

<210> 2768
<211> 421
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-012-Q1-E1-H8
<400> 2768

gacgggattg caatgatgtt attgtaaatt ctattaatgt caattgtgct aataatatgc 60
aaaaccctaa gcttggggat tctagttttg ctatgtccac tacttgttgc aatgatcatg 120
attgggggtga ttcttcttat gatcttgaaa atttatattaa gtcccatgat gaatatgaga 180

ttgataaaaa tgtttgcaat attgaaagtg ggtttggaat agtgtcaact ttagatccca 240
catatttgga gaatgttcaa tattatgaaa tttttgataa aagtggggtt ggagagggtca 300
tgacttttagt taatgttaat cccactatth tggaagagtg tcaacttcgc atgcatgtgg 360
atcgtgttga caatatgtta tgtgatagct ataatgctga atttgcttat gatccccat 420
g 421

<210> 2769
<211> 446
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-A11

<400> 2769

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tgatcattgt tgaagggggg actgccgccc gcagctgaga gacatgaatg accggatgga 180
tccgagcttg ctccggcaat gccagtctgt atgccacctc gcctacccat tggagtacct 240
gaaacgggtcc aaagtaacga aaggctagtt tatgattagc tottgccgcc accgaggaca 300
gtgcatacgg ctgcagcttc aaatacacc aatcatggac tgcaaaagcc ctgtccgagc 360
gatgttgatc agccttctct ttcatacttt gtcgtgccct gttgagatgc taccgtaaca 420
gagccaccat ggctgccctg tccga 446

<210> 2770
<211> 377
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-A12

<400> 2770

ttcgcggggc gacggggaac actaagctct gttaagcggg gcccgaatct tcacagttcc 60
gtttaattct ctccagtagt tcccatgtga gatcaataga cctcagcata gaggtactac 120
cacaggtggt atcaagcatg ttgcgattac catcagatgg cgttcacg taattgcgac 180
taagcaattc tgtgagagag ctcatgattg gggcatgatt cagcacattg agttaagcct 240

gatocacgct tgggcatgca ttctcctgcg cgatgccaat acttatatat gtaattacga 300
 tcacgatgaa caggatgcat aagctagatc ttcagttgag attctaactt caatagctta 360
 gcattctaag atctcgt 377

<210> 2771
 <211> 396
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-A3
 <400> 2771

ggacgaatca aacgagaaca tcaagtcac tacgcgcgcg ccaagcaata cgccgagggg 60
 tacgatgcc aggacaagga gttggttcag cttaagcgtg aggcccggat gaaggggtggg 120
 ttttatgtca gtcctgaggg caagctgctg tttgttgtca gaatcagagg tatcaatgcc 180
 atgcacccaa agaccaagaa gatcttgacg ctgttgcggt tgaggcagat attcaatgga 240
 gtgttcctga aggttaacaa ggccaccatc aacatgctcc gcaggggtcga gccatatggt 300
 gcatatgggt acccgaacct gaagagtgtg agggagtga tctacaagag aggttatggc 360
 aagctcaaca agcaaaggat tcctctgacc aacaac 396

<210> 2772
 <211> 406
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-013-Q1-E1-A4
 <400> 2772

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 catcgtcatc cgtcccatcg tcaggtccag atcgaagtca agatgagtcg tgaccggagt 120
 gctggacgtg ggcaaagttc tctgggttac cagtttgag atggtgagcc tgcaaagcct 180
 gctgcaatac aaactgcgat gccagcacgt gctgacaaac cagcactggc agctgccgat 240
 gtaaccaagc agattgcagt tggcattcta agtagccggg agaataacta ctaccgtgca 300
 gatgggcaca atacgggcaa ctctcttacg gaccgtccgt catccaatgt tcatgctgca 360

cccggaggtg gtatgtcact gtgctacttg tctggcgga actgat

406

<210> 2773

<211> 434

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-A5

<400> 2773

gacgaataaa acgaaaatct aagagacaag ctaaaggaag catcgaacac catacaagag 60

ttgctgctgg agaaatcaaa cgctggcagg aaaggtcaaa aggtgtgaga aactcaccat 120

gttgctaccg cctcactaac cagagtgact ccagtttcac gttttcacgc cctgggacat 180

ggcatcacag ttgcttttgc aactctagct tgtctacagc cattgttttag ccccgcccca 240

cctttgttta gagttgagtg gtagttgaat catctcgtec agggtaagct tggagcgctt 300

tgtgcatagc catgaatgag atgaccaata agttgattca atgtaaagta gaataaccac 360

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atggatattg caac 434

<210> 2774

<211> 437

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-013-Q1-E1-A9

<400> 2774

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tgtccaccat atatgagaga agaagaatgc cgactgttgt tgtggggggtc gcttctcctt 180

cttttccttg tgctagatat ttgtaacgca ctagggaaag gaggagtagc gaccatcacc 240

gacggtcgca atatcagaga gggagtgcc ccatatacgt gagatgagag tttaggaagg 300

aagactcgac agacctaaag tcaaccogtt gcttattgag taatagtgat ctgtgtgttg 360

agtttcttgc ttgttgctt tgattgattt tcaattaatg tttcaactat gaacatanga 420

aatgcctgac gatgaaa 437

<210> 2775
 <211> 417
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-013-Q1-E1-B1

 <400> 2775

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 cctaggttcg ggccgcgagg atgcgtaaaa ccctagtcct gctttggtgg atgtattgag 120
 tgttcttgag ctttctaaac tagctacggg ggctgtcctg ttccaaatag cggaatcctt 180
 ctcttggtcg cctcgggcct ccttttatag gaaaaagggg ctgccacagt ggcacacagg 240
 aggtggaaag gcctacagtg tgcgagctta tcgcacggca ttacgggaca aagtgcacatca 300
 aatgtgctac gtangtgtcc attagcttta tcggggggcg gaatgaggcc cgtcncatct 360
 gtcaccgctt cgctcgcctt cgacacgcgc ctaagatggc gatgcatgca gcgccat 417

<210> 2776
 <211> 417
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-013-Q1-E1-B4

 <400> 2776

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 aggccaccgc ttcttaaaag cttctctgac tctgactcga taggcggagg aggaggctac 120
 gcttataagg aggagaagga agcaaggagg gaggcagcaa agcaccatgg attccctctg 180
 gcacgcctcc gtcattgtcc tgggtgctcct attcattgga ggatccgatg ccaaccacagc 240
 cgcccgtcgc caggttcagc tggatgtaaa ccacaagaag cagccactac agacatccag 300
 accttacaac attgcccaca ggggttccaa tggcgaaata cccgaagaga cagctgcagc 360
 atatttgagg gctatcgang aaggtgcaaa cttcatagag actgatatac ttgcatc 417

<210> 2777
 <211> 390

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-013-Q1-E1-D3

 <400> 2777

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 agtcatgcat gaaaaaacct actgtccgcg aggctctggg atatagtgcg tgcgtgcaaa 120
 cagtagtaca tacaagggtga caatggaatg tccaagaaac agaattgcttc caagcatgca 180
 tcatgtggac gtggttaagag taatactagt actactatac ataccgctac aggttggcat 240
 gcatgcatat ggttttaata tatttgcaaa gcttgattgg catcgaacta aaccatatgc 300
 atagtatacc atataaacac acgagcggcg atcccatgtt cctcacctct gcggttcac 360
 tcccctcgct gccgcctcca aggaaaatat 390

<210> 2778
 <211> 401
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-013-Q1-E1-E10

 <400> 2778

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 ttatgactaa tgttgattcc atggattata cgcactctca cccttccatc attgctagcc 120
 tottcggtac catgcttgcc atttatcacc ttgagagttg gtcaaaaactt cgtcgggtgca 180
 tccaaacccc gtgatatgat aactctgtc acacataaac ctcttatat ctctctcaaa 240
 acagccacca tacctaccta ttatggaatt ttcatagcca tttcgagata tattgccatg 300
 caactttcca tcgttccatt tatcatgaca cacatcatca ttgtcatatt gccttgcattg 360
 atcatgtagt tgacattgta tttgtggcaa atgcaccatg c 401

<210> 2779
 <211> 373
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-013-Q1-E1-E2

<400> 2779

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atccagctgc tctgccaatc gtgccttgtc cggattgcgg caggaacgtg gtgacctacg 180
ttgctaggcg cgggcagaac gccggtcggg gtttctacaa gtgccggaat cacaaccctt 240
catcggggcg atgcaatttc tacaggtggc aggaaggcta tgcagcgcgt ctggccaatc 300
ttgaaggagg agaagctgct gtgggtcaaa tcggtccggg tcagatgcan ggtgggcaag 360
ctgtcgaagc tca 373

<210> 2780

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-E3

<400> 2780

ggccgagggg gtcacgaaga actagagccg ttgcgccatg ggccccaaga cgcacgccac 60
gaccagggac acggagcagc tcacgcgaac agacgctgcg cacagggtta gctaaacctt 120
gcctgagatg tgagagcata tgggatgtag ttctgctttc agtgtgtcat ggttttgaag 180
atgaacgcga gaccttttag caccagtgtg gcatcctatt gtggctttca gagtcgctgt 240
ccacattcgc gatacgttaag catttatgag atcatgttta cccatgtctg gattcgcaca 300
gcagtaatat cggttgtaac atgaaaggat ccccgtagg atgcatgcc aagaaactgt 360
tgctgttatg tcagagttca tccaaactgg aggcataata ccatttgg 408

<210> 2781

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-F1

<400> 2781

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tgctgtgcta tactatcggg ccgtgatcac ctgggcggtg atcacgggta tataacttgta 120

tactagatac atgacacatg tgatgactaa agtcgggtcg gctcgtatga gtacccgcaa 180
 gtggatcttg tggcggagcg acagggcagg ttgagaccgc ctatgtgaga ggtgggcctg 240
 gccctgggtca gcgttcgcgg atacttaaca cgcttaacga gatcttggtta tttgatctga 300
 gtctggccat ttggtctata cgcactagcc atctacgcgg gagtagttat gggatatccg 360
 cgtegtggta tcagccgaag ccttcgtgac gtcagcgact gagtggcgcg cgccgttttg 420
 gaccgctttg acg 433

<210> 2782
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-F10

<400> 2782
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 aaggtttaga gtttggcaca tacaaattta cttggaacag catgtagata ccatatatag 120
 gtaggtatag tggactcatg tggaataact ttgggggttta aggagtttgg atgcacaagc 180
 agtattctcg cttagtagag gtgaaggcta gcaaagact gggaagcgac cagctggaga 240
 gagacaacag tcatgaacat gcattaaaat taatcaacac cgaatgcaag catgagtagg 300
 atataatcca ccatgaacat aaatatcgtg aaggctatgt tgattttggt tcaactacat 360
 gcgtgaacat gtgccaagtc aagtcactta aatcattcag aggaggatac caccctatca 420
 taccac 426

<210> 2783
 <211> 424
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-F2

<400> 2783
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 gttgtatatt cgaagtatgc tggaatggag gtggagttga atgattccaa ccatctgac 180

ctaaaagagg acgatatcat aggtattctg gagacagagg atgtgaaaga catgaagcct 240
 ctttagcgacc gtgttcttat caatgtagct gtagctgaag ataaaactgc tgggggcctg 300
 ctgctgacta acagtgtcca ggagaagcca tctgttgaa cggtggctgc tgtcggcccg 360
 ggctaactgg actatgaaag caacaggatc ccgttgccgg ttatcaaaag gcaattccgt 420
 tccg 424

<210> 2784
 <211> 289
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-F4
 <400> 2784

ctctccacgg tgaagatgaa tccacatgcc cctggatgga acaagaggta agcctgatgc 60
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 tgatttagcg tagtaatgga tgtgcaaaaa gaatttaggt atggccaggt aggtgttgaa 180
 aaaccatcat gtggaatgga aaggaagttt gtgtgggctg tagtatggtg aagcacatgc 240
 cagtttctgg gctgaaaaaa ttgtacagat ttagatgcaa aataaaaga 289

<210> 2785
 <211> 426
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-013-Q1-E1-F5
 <400> 2785

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 gtttttgacg actttagat ttttgcaata agtatgtgag ttctttatga ctaatattga 180
 gtccatggat tatatgcact ctacctttc catcattgct agcctcttcg gtgccgtgca 240
 ttgccctttc tcaccttgag agttgggtgca aacttcgccg gtgcatccaa acccctgat 300
 atgatacgct ctatcacaca taaacctcct tatatcttcc tcaaacagc aaccatacct 360
 acctattatg gcatttccat agccattccg agatatattg ccatgcaact ttccagcgtt 420

ccattt

426

<210> 2786
<211> 405
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-G10

<400> 2786

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ctgaaaggat ttaggcagca ctccggctga agatggaagg aatagaacac gagcttcacc 120
caatgagatg gcacttgacg agatgaataa tgcaatgcct ccggaagaat tgaaagaatt 180
gaataaaaag aacttagaag gaaggattga atggagtgtg tgagaaaatc aacaacgaaa 240
gaataagctt gttgtggtct tataggtaac atctcaagat cataagggtga taaccggcca 300
caaacggaaa tgattggata gctgagagga acgaagaaat gcaaaactcc acttcaaaac 360
aatactaaga attaattaca cttcgagacg ccagaagaaa agata 405

<210> 2787
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-G12

<400> 2787

cgggccgacg gggaagtcca ccgccaagga gggcggcgac aagaagggca agaagaaggc 60
caagaagagc gtggagacgt acaagatcta catcttcaag gtgctgaagc aggttcaccc 120
cgacatcggc atctcctcca aggccatgtc catcatgaac tccttcatca acgacatctt 180
cgagaagctc gccggcgagg ccgccaagct ggcgcggtac aacaagaagc ccaccatcac 240
gtcccgggag atccagacct ccgtccgcct cgtcctcccc ggcgagctcg ccaagcacgc 300
cgtctccgag ggcaccaagg ccgtcaccaa gttcacctcc tcgtagagtg ctctgctcc 360
tgtgtctcgt agttagctgt ccgggtgtgt ttgtggc 397

<210> 2788
<211> 418
<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-G6

<400> 2788

gggccgacgg ggaagtccac cgccaaggag ggcggcgaca agaagggcaa gaagaaggcc 60
aagaagagcg tggagacgta caagatctac atcttcaagg tgctgaagca gggtcacccc 120
gacatcgga tctctccaa ggccatgtcc atcatgaact ccttcatcaa cgacatcttc 180
gagaagctcg ccggcgaggc cgccaagctg gcgcggtaca acaagaagcc caccatcacg 240
tcccgggaga tccagacctc cgtcgcctc gtctccccg gcgagcttcc caagcacgcc 300
gtctccgagg gcaccaaggc cgtcaccaag ttcacctcct cgtagagtgc tctgtctcct 360
gtgtctcgta gttaactgtc cgggtgtgtt tgtggccgtt ttatcgtgta agaatcca 418

<210> 2789

<211> 392

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-G9

<400> 2789

gggccgacgg gggccgccac gtctccgggg aacggagccg ccgccgcagc tgccaaggaa 60
gacgcatacct cccacatttc cggcacccgat atggctccga ccacgccgtg atcctgacct 120
aatatgggtgt attagaagat aagaagagga catttgctga tgttttttcc attgttttgt 180
gctaataataa tgtgtgtgtt ttgtagcgag gagagggagt acatgtgacg tccatcgacc 240
cctccgtagt ccggctacct ggccagggtt tgtttgctcc tgatgtaaag tgggtgttcca 300
cttttgatta gtttcaccga ggcgtactat tttctactac ctgtgatcag acgtttagt 360
atagactttg ctggtctgtg ttgttagtcg tc 392

<210> 2790

<211> 419

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-H10

<400> 2790

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ccctacttcc tgcttgattg atcttgatga tatgagtatt acaagagttg atctaccacg 120
ggatcgtaga ggctaaaccc tagaagctag cctatgatta tgattgttgt gtcctacgga 180
ctaaaccctg cggtttatat agacacccga gggggctagg gttacacaga gtcggttaca 240
gagaaggaga tctatcatcc gaatcgccaa gcttgccctc cagcgaagg agagtcccat 300
ccggacacgg gacgaagtct tcaatcttgt atcttcatag tccaacagtc cggctgtccg 360
gataccccct tatccaggac tccctcagat accaccactg aacgtagctg acacgaaag 419

<210> 2791
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-H2

<400> 2791

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gctcaaaaga tataagcgaa gcacatagag tattctaaca aattccaaat catgtatggc 120
tctctcaaaa ggtgtgtact gcaaggatga ttgtggtaaa ctaaaaagca aagactcaaa 180
tcatacaaga cgctccaagc aaaacacata tcatgtggty aataaaaata tagctccaag 240
taaagttacc gatggaagta gacgaacgag gggatgcctt ctggggcatc cccaaacttt 300
ggcttttttg tgtccttaga ttatcttggg ggtgccatgg gcatcccaa gcttaggctc 360
ttgceactcc ttgtccata atccatcaaa atctttc 397

<210> 2792
<211> 367
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-013-Q1-E1-H4

<400> 2792

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gggtgaagga gttcatcacc gaccaaggag tcatacccaa ggcgtcgggg ccgttaaaac 120
ccttctgtga aaacactgga gctattgccc ttgccaagga gccaggttc acaagaagac 180

caggcacatc aagtgtcgtt tcaactccat ctgtgaaaat gttcaagatg gagacataga 240
tatttgcaaa gtacatacgg atctgaatgt cacatatcca ttgactaaac ctcttttcgcg 300
agcaaaacat tatcaacacc agaactcaat ggggtgttcga ttcatacaca tgtaactaga 360
ttattga 367

<210> 2793
<211> 326
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-013-Q1-E1-H5
<400> 2793

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tagggttcgc gtgaggattg cccgcaggag gaacgacgag gaggacgcca aggaggagct 120
ctattcactc gtcaccgttg ccgatgtgcc tgctgagggg ttgaaggggc tgggaaccaa 180
agtcgtcgat gacactgagt agactctttc tttatctaca tcgctagaat gagctgttat 240
tttgcatcgc accagcatgt tttttgtatc ctgtggaagt tttggagtat ggaatatcgc 300
aagctatcta ttttccttca caaaaa 326

<210> 2794
<211> 423
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-013-Q1-E1-H6
<400> 2794

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atggtgaagg gcacgcccta ctcccatatg aaccaggctc gccgaaacga ggagatgcac 120
gggaccctcc tctctgagaa cgtcatcggc gtcattccacg accattacgt caccttccgc 180
cttgacatgg acgttgatgg cgccgacaac tccttcgtcc gcgtcgatat ggcccgcag 240
gacaccgcgc ccggcgagtc ccccgaggag agctacctca aggccacacg ccacgtcgcg 300
agcacggaga aggacgcccg ggtccggctg aagctctacg agccggccga gttccacgtc 360
atcaaccgga cgaagaagac gcgggtcggg aaccgggtgg gctacaaggt tgtccccgcc 420

<210> 2795
 <211> 377
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-014-Q1-E1-A11

 <400> 2795

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 gccagcccat ataaggccta cttgtgtcag gtccatttaa gccacggcc catacgagat 120
 gagccaattc ggcccgtaaa cgcccggtta aagatttgac accattgcag cccatcgta 180
 gttcgacccc gttaacagcc tgctatatat ttggggtcaa tatcgggccg atgagatttc 240
 ggctgttaa cgcccggtt aatggatggg ccaattttca agatgtacat ctttcggcct 300
 tttagcgacc catttaaagt tanggctagt ttccggcccg gtgtgtcttt catcctgttg 360
 acgaccata aatctga 377

<210> 2796
 <211> 399
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-014-Q1-E1-A2

 <400> 2796

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 ttcaagcccg gtgaaaagct ttcaggaatt gttggaagca cctattacat ggctcacgaa 120
 gtattgaata gatactatgg accggttaata gacatatgga atgccggggg tatcttatac 180
 attttactat gtggagtcc tccgttttgg gctgagaccg aacaatgggt agcacaagct 240
 attcttcgtg ggaatatcga ttttaagcga gaaccctggc ctaatgtatc agaaaatgct 300
 aaagatttgg ttcgacctat gttggaacca gatccaaagc tcagggttaac tgcaaagcag 360
 gttcttgagc accattggct tcaaaatgct aagaaagct 399

<210> 2797

<211> 354
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-014-Q1-E1-A3

<400> 2797

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 tgaacggcgg ctggcagcgg cgtatctgca gttttctgaa gaattgcgtc tgtccgccct 120
 tgttgacagag caatccgaga atggcctggg gtcaggggtc tagaaggccc atactanggc 180
 ttctgtctcg tgctcaacga caagctgctc gaggggtatac ttctgcaacg ttcgaaactc 240
 acctgtcgag caatcatttt gcccctaatg gcatgatttg taggagattt agctctgagg 300
 tgctgtcttc ggagcaaatg aatcttatta aacgactacg cgaaagaaca tgtg 354

<210> 2798
 <211> 403
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-A4

<400> 2798

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 aaatagatga tgggttgcta gagtgacaga agcttaaacc ctagtttatg tgttgcttcg 120
 ttaggggctg atttgatcc atatgtctaa tgttggtggtt aggtttacct taatacttct 180
 tttgtagttg cggatgcatg caataggggt taatcataag tgggatgctt gtccaagtaa 240
 gggcagtacc caagcaccgg tccaccaca tatcaaatta tcaaagtacc gaacgtgaat 300
 catatgagcg tgatgaaaac tagcttgacg ataattccca tgtgtccttg ggagctcttt 360
 tctcattata agaaattgtc caagcttata ctttgctaca aaa 403

<210> 2799
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-B1

<400> 2799

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 aacgctgtcc atgcggaagt caaggaacaa tatctcgtct ccgcagcaga ggttgaggat 120
 gcagtcagggc tctggaaatg ccagcaagct atgcttcagt atccagaaga gagtagctct 180
 tggttcacct gctccagcaa gaacgacttc catgacgtct ggtactggca tctttgatcc 240
 agctctgcgc gagcagataa tggcagggag attcggcaat gcgcagaggg tggtcaacgg 300
 caagaggaga atgtccgtcc tctaaggtga agaagatcgg ttcggaatgt tgagacagcg 360
 gtgcggaacc gggatgctga aggaatgtgg tgggtactttt 400

<210> 2800
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-B11
 <400> 2800

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 tcgacgtact tcatggcccg ctacgccttc ttcctccgga ccaagagggga gccgtcgctc 180
 gagggttct tccagagccg ttttgtgggt aagcagaagc gtctgatgaa agcccgggat 240
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 cagagcccct gcgcgtctc gcaggagagc caccaccatt gccattctca ctgccattgt 360
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<210> 2801
 <211> 395
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-B3
 <400> 2801

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 gggaatggag ggagaaacag aggtctttcg gacgagcttg aatcaaatga gtttttctgc 120
 catgttttac acccaccgtg tcggaatggg ctacagaggtg gtcgtgtcac gtctaattga 180

agttactaac ctacccttat ttagagtagt ggaaattggg cccgatggatt gtccgtgtaa 240
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 gacattttgc cgtttctttc gaaatttggg acaataagca tccacgttta ccctggcaac 360
 taaattcgaa tccattttat attcctatat gaatc 395

<210> 2802
 <211> 397
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-B4
 <400> 2802

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 agcagggcag agcaagcccc tggccagtgc aagaaagcta cgccatcccg cgtgatgaga 180
 cgctccgggt ggtggacacg aggacaccga cccctcgcaa gaactacgct ttcattgtcca 240
 aggagccgga gaagatccac cacatccggc agggccgggc cccatacaac ggctggaaca 300
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 tgcagcacia caggcagtac tccctggggc cgcagac 397

<210> 2803
 <211> 368
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-B7
 <400> 2803

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 gccaaactgcc gggtagagcg acgagtggct cgatgagtcg cggcttgatg ccggacagga 120
 tgagtctgtt ggcccgtcgc acctgccgtg tggactgcgg atgtgccacg gaggccaggt 180
 cgaggcggat gccggagacg gagcagtatt gctcagagcg gcccttggca aagttggtgc 240
 cgttgctctgt gctgatgttg ttcggcatgt cgtagcgcac ctctatgtcc ttgatgaatc 300
 ggacgactgt tggcccatcc aatttcttga ttggtcttga ctcaatccat ttggtgaaca 360

tgtccaat

368

<210> 2804
<211> 410
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-C10

<400> 2804

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gcttgacaag acacaatggt aagagggtgag tcggatgcct cacaaattct tccaaggatt 120
tggtgagctg gatgatgttt tttgtagcgg cggtgccgac gaccttgtct acatccaaag 180
ctatgggtgca actgctttgc ttggatttga catgaagcag aggcaatgga agtggtcggc 240
aaaatgccct gtgcgcaaaa agtttcctct ccagctgttc actggctttt gctttgagcc 300
tcggctggat attaccacct aatacttgta ccggtctgta ccgttgattt gctcgggaatc 360
aaacaaaacc agtgatcctc gtcttttgtg gaagatggat gataaactct 410

<210> 2805
<211> 409
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-C11

<400> 2805

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tgatgaggaa acatccaaca aactggaagg cattcctggt gttctgtttg tgcttcctga 120
ttcttatgtt gatcccgagc acaaggacta tggagctgag ctatttgtga atggagagat 180
tgttcagagg tctccggaga ggcagagaag ggtggagcct gtgccgcaga gagcatcaga 240
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atgagccaag gtgctcaatt gaagatcaaa aaataacaat ccctgggtggc ttccgccggg 360
taaactgaaa ggataaatat catctacgga atagaagaac tgcattgttc 409

<210> 2806
<211> 374

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-C9
 <400> 2806
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 aagcatgttg cgaaaattca tatctaaact agccttcac tctttaattt ttttcatttt 120
 gataaaagta cataagagta gttgattcaa cattttctcc cttgggggtgc ccaaatatgg 180
 tcttcacatt ctcataagtc tcaacggcat ccccttcaag aaaaccattt tcaaaaatag 240
 agtctgaaac ttgcttgaag gaagaaggta aaccaagata aaaacttttc aggtatatct 300
 ctagttgata ttggggcaca tagctagctc gaattctcaa caacctatcc gaagcatctt 360
 tcaaagattc atca 374

<210> 2807
 <211> 316
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-D1
 <400> 2807
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 atagtgtatg ggacatcaag atactttcac cacatgatgt gcacaagttg ggcacacagg 120
 ggaatgatcc acgttacctt tcttaattgc atgattaatg tgctgtctct gtggagttcc 180
 atgggcaaaa gtcaaatttt gagtgcacga cgggttgacg cgacgactcg acagcacatg 240
 gtaggagact tgcacacgga gggacagtat ccccggaacc tcccaacttc acatcttcgt 300
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<210> 2808
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-D10
 <400> 2808
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ggatagggac aaagttaata ctgtgaaaga agatagtgat cctaatagtg catccaaacg 120
 gcggaaggtt aaaagagaac agtctgcttt ggaagctggg gaatacgcgc cttctgctcc 180
 acagcctccg agcgttggac ctggtaactc acagtttgaa atacgagaga gagaaagaaa 240
 ggggtgctatt tcacagcatc ggccatcaca tgctgatgac cttcctagga tgcattgcaa 300
 ggattcaaca agcaagacaa gtcgtaaaga ggctgaccaa acacatcata gagactggga 360
 agaggagaag aggcaaggac tgaagcaaaa 390

<210> 2809

<211> 319

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-D2

<400> 2809

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 cactcaacaa ggctctcatc gcccaatggg ctggatgaat caacaggctt tcgaccagtc 120
 ataagctcta agagtacaac accaaagaga gaacacatca gatttctcag tcagtttgcc 180
 actcgatgca tactctggag ccatgtatcc aaatgtcccc ataaccggg tagttacatg 240
 tgttacagca tcgaaagcca atcttgcaag tccaaaatca gccaccagtg cgtcaaagtt 300
 attatccaac aaaatgttt 319

<210> 2810

<211> 325

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-D9

<400> 2810

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 cgatatctgag aatttggggg ccagtgcaaa atcaaagttc aggtccagat cttacgaaat 120
 cgttatggaa agaagttttt ttaagttacc atatgcgcaa catacttttt ccaagagcta 180
 tatgggtgcaa ataaagatga attaataacc atgaatcggt attttagctt gaaggaacaa 240
 tcatttccag gaagttttac cacaacgtct taccgtgaat acaacacaga ctactgggtt 300

aacttattat caaaatcggg cttag

325

<210> 2811
<211> 385
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-E4

<400> 2811

gggtcgacgg gggaacgtac tggacttgcg agatatattg gaggataagg caaggcaatc 60
aagatcgatc tacggatcgc gtgggcgccc catgatacgt gacgacaacc gtcacgcccgg 120
acacaacaaa tccggccggg ccgaacacag tagacaaagc tcttttgagc ttcgtcatga 180
tatagcccaa tacagaggcg ccgcacaccc actatgcttc acaaatgaag taacggatca 240
tcaaattccc gaaggggttta aaccctgtaa tattgaatct tatgatggca caacagaccc 300
agcggtttgg atcgaagact atctccttca tatccacatg gcccgagtg atgatctcca 360
cgccatcaaa tacctcccac tcaag 385

<210> 2812
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-014-Q1-E1-F1

<400> 2812

gggtcgacgg ggatggatgc gtgtgatcga gttgatcaac acccacacgt gtgggcgtta 60
acatttccga aaattaatta gttacgctaa tagactgaag gagtttaatg tgacgttcag 120
agaagcattt aaaatggtat gaaaatgcaa ttgtcaaaca gaggtactaa ctatctgtgt 180
tatcattctt ctgaagtctt gaggaagatg tccaaattat gttttcccct tgaccatcag 240
atgaagcttg gtctccggct ttggatcatat gtttgagagg aagcttctca tggaaggggtg 300
gggagagttt cggttcggaa ggtggtgggt gggagcggag gaaggaaagg ggagaaagat 360
gtgctttcct cgctgcaacg cacgggcaaa ttactag 397

<210> 2813
<211> 380

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-F12
 <400> 2813

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 ggagctgctg tgcgagaacg gacctgagct gtgtgcggtg gtgtcataag gagcctatcc 120
 atctccacta gaattatccc aagtttctact tcacatcgtg atgttgtttt acctttttcc 180
 tgtcattgtc ctgctataac ggatagcgct ccctgttggc gccgccgccg gcggggatgc 240
 cctagtgggtg gaggggtgtat gtcctcttcc gcgggggtgcc cctgcttgta cctagatggt 300
 tactctttcc gtccattgtc accggctaac attgtgataa tatcagtctg ggtaatgtta 360
 gattaagctg ttgtcctccg 380

<210> 2814
 <211> 380
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-F3
 <400> 2814

gggtcgaccg ggaagaagcc caaagcggag aagcgggagg cggcgaccaa ggaggccggc 60
 ggcgagggga agacgagggg ccggaagaag ggagcaagg ccaagaagg cgtggagacg 120
 tacaagatct acatcttcaa ggtgctcaag caggtgcacc cggacgtcgg catctcctcc 180
 aaggccatgt ccatcatgaa ctcttctatc aacgacatct tcgagaagct cgccggcgag 240
 tccgccaagc tggcgcgata caacaagaag cccaccatca cgtcccggga gatccagacc 300
 tccgtccgcc tcgtctctcc cggcgagctc gccaaagcac cgtctctcca gggcaccaag 360
 gccgtcacca agttcacatc 380

<210> 2815
 <211> 423
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-F4
 <400> 2815

gggtcgacgg ggactactat gaagatgtat acaaggtttg atctgatcat taccaacttg 60
 tggcagacgc ggaagaagag ttggtgaaga tcatcgggtgc aggttgacgc agctaggggtt 120
 ttacaacctc ccaaccgcaa gattatttct gggatgatgga gcattacgag gctaaaaaat 180
 gggctttcaa gtaccgaatt gacttgtaaa cattgggtggc gtcaagacaa ctgtagtcag 240
 cttattccaa aaaggatagg ataagataat ttgagtcaac tgcgcagccg ttgagcgaca 300
 tggctttgct aaaccagtgt gagttactgg tcatttccaa caaaaacat gtgctacgct 360
 actgccatgt tgtgaccatt ggaaagtggg taatgcatgc cgcttaattg caccaactcc 420
 aag 423

<210> 2816
 <211> 440
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-G1
 <400> 2816

gggtccagaaa accgggtcga cgggatgtaa tgctaggtgg ctgacattgc aagtataatt 60
 tactagtggc tcagtgtcta attgcaagtg taatattact tttttctttt gtaactgctg 120
 atttcgagtc attttattat gtccaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aaaaaaaaaa aaaaagaaaa aaaaaaaaaa aaaaaaaaaa aaaaaacggg cggcccaaag 240
 gattcaaact taagtaacca tgaaaggaaa gtcaaaaccc ctccaaaagg tcaaccaaat 300
 tcaaatcaat ggccgtcctt ttaaaaagtc ctgaatggga aaaacctggg gttaaccaa 360
 ttaaaccctt ttgaaaaaaa accccttttg ccaaatgggg ttaaaaccaa aaaggcccca 420
 aaaaatttcc tttccaaaaa 440

<210> 2817
 <211> 388
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-G11
 <400> 2817

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cattttgcct ggggtctttga cgggtgggga cacatggtgg atgcgggaaa aactagttaa 120
 ttggagggaa aagagtacct ggggtggagg gaaatagttt tttttgcgag gagatggttt 180
 attttcagca attaatttcc acttagtatt aggtaattca cttacttcga cataagtagc 240
 aaattattac ttataaacta aatcttacat gaaaattatg atatgtggta ttttactgt 300
 tttctgtgga aaattgtaaa taagtatgtc gaaagtgtga caaaagggtc ctacgtatgt 360
 gatctggact gcgtctctcc acccttca 388

<210> 2818
 <211> 382
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-G2
 <400> 2818

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 tggaaagtcc tagatgtccg ctctgcaatc gacgtgatgc atgttacgaa gaatatttgc 120
 gtgaacctgc taagcttctt gggcgtgtat gggaagacaa atgatacaaa ggaagcacag 180
 caggaccagc aacttttgaa agaccagat gaccggcatc cggaatgggt tcaaggctgt 240
 gccagctacg ctcttaccaa agaagagaag gtcatttttt ttgaatgcct gagcagtatg 300
 aaggccccgt ctggcttctc gtcgaatata aagggaataa taaacatggc ggagaaaaag 360
 ttcaaacct gaagtctcac ga 382

<210> 2819
 <211> 397
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-G4
 <400> 2819

gggtcgacgg ggagtaaaag aaaataacta aacacgaatt ttaatttagg ttcacattag 60
 ttcaaattaa atccattaaa ttataaaatt ccaatttaag ctttgttacc aaataaaaca 120
 aacgaaaatt ttctcgccct aaattttgga aaactttttc ttaagcattc cgataatcgg 180
 gatgttacac accctgttca ctaaagatga gagaactcgt tacttttata tccttaaaat 240

atttccattc tcattaaagg gtgatgctaa gatatggttt aattctcttg atcctgggtg 300
 tgtgcgtagt ccccatgata tgatttatta cttctctgct aaatatttcc ctgctcataa 360
 gaaacaagct gctttaaagg atatatataa ttttgtg 397

<210> 2820
 <211> 350
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-H3
 <400> 2820

cggtcgagc gggaggaaga gcccgaggag gagctaggaa ctgaatatct agtgcagccg 60
 cttggccgtg ctgaagatga agagcattcc agtgactttg agccggaaga aaatgggtgat 120
 ggtgctgagg atgaggagat tgaggatgat gatgctgagg atggtgagga ttctgtcaag 180
 ccgcaatcct catcgaagag gaagaggctt ggtggggaag atgaagatga tgatgacggt 240
 gatgatgatg gtgatgatga tgagaagcct ccatcaaagc gatagtcaat ttgttcttgc 300
 tgatctggta tcttttctgc ttgggccaag aaggaaaata atcctctggg 350

<210> 2821
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-014-Q1-E1-H4
 <400> 2821

gggtcgcccg gcttttattt ctcagcgtgc tttttctttt tatttctcgc cccacggaca 60
 aatgggcccc gcgctgtttt tctttttatt tctcagccca cagacaaatg ggcccgtcag 120
 ctatagaaat acgagataca tatgcaacat gtagagccag gactactgtt tcaacctcag 180
 agaccgtatt gagcacatat ttccttgtac cgggaccgta ttgaagcaat acgcaagttc 240
 caggaccaa ttggacgtcg ccagcgacta cgaggactat agatgcaatt atctcatgtc 300
 tgagaaagag agaaagagct accgagaaag atttgtgatg tgtgcatgca tgtgaaagaa 360
 aatgagagag aaatgcatgc atgacagaga a 391

<210> 2822
 <211> 366
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-014-Q1-E1-H8

<400> 2822

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 gcagggagtc cggccgaggt ttcccatagc gccccgaacg atgtgaacag ggttcccag 120
 ataactaacg tgtattcggg acacccggcc acgtacctac cgcattcacag cccaccccta 180
 cggtcagcgc tgtccacggc ctccagtacg ctacaaacac cagaaactac ttgcaactcc 240
 tggacagaga gctaggggtga ataagaagtc gagcggcgtc atacttcagg gcccaacgca 300
 tggtagtagc tgtatcttaa atcacacata cagatctcag tgcttaaagt cngcttcaat 360
 gaaaca 366

<210> 2823
 <211> 398
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-015-Q1-E1-A3

<400> 2823

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 agatgagaaa gattaactag tgtggctccg acatttcac gaacagctca tgtgcatang 120
 aggtgagcta gagcaccaa atgtgccctc ccctcgccgg ccagagaaaa cagagcactg 180
 tagagtgtc tgccgtggca atgggggtata tatagccaac tcatttggtc cagttcgtgg 240
 ctggaaccga gactaaagcc aagccttctg tcccgggtga agccaagaaa cgggtccaat 300
 gattgtgggc caggagcgag gccattggg cccgggtcgt gcctcgaacc gggacaaatg 360
 ggtcaatacg aaccgggacc aatgcccacg agggccca 398

<210> 2824
 <211> 436
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-A4

<400> 2824

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aaacggcaag caaaaagaga ggaggagatt gggaaagaga gggcgaataa aacggcaaga 120
gtgaagtggg ggagaggaaa acgagaggta aataatgtaa atgcgagaga gatggggttg 180
tgatgggtac ctggtatgtc ttgacttgag cgaagacctc cccgacaacg gcgccagaga 240
tccttcttgc tacgtctgga gctaccattg gttttccgcg aataggagag ggtaatgcag 300
caagtgtagc gtaagtatct ccctcagttt tgagaaccag ggtatcaatc cagtaggagg 360
ctcctcaaaa gtcccacgca cctacacaaa caaactgaga actcgcaacc aacacaataa 420
aggggttgtc aatccc 436

<210> 2825

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-A5

<400> 2825

ggtgaatcca tattaattcc tgtcaggac gagcgatggt cttttcctac caatctatcc 60
ctctaggagc atgcacgtag tgcttggttt ttgatgactt ccaaattttt gcaataagta 120
tatgagttct ttgactaat gttgtgtcca tggattatac gcacttttac ctttccatca 180
ttgctagcct cttcggtagc gcgcattgcc ctttctcacc ttgagagttg ctgcaaactt 240
cgccggtgca tccaaaccog tgatatgata cactctatca cacataaacc tccttagatc 300
ttcctcaaaa cagccaccat acctacctat tatggcattt ccacagccgt tccgagatat 360
attgccatgc aactttccac cgttccggtt atcatcatga cacgcattac tattgtcata 420

<210> 2826

<211> 442

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-A6

<400> 2826

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cgacggcaac gacatcgagc tcgtctcccg ctccgccgcc ctcatcaacc agaaatgcc 120
tgtcaagaac aaggatatca ggaagttctt ggacggcatc tacgtcagcg acaagggcg 180
catcaaggag gagtagagag ccggaaccg tcccgccac cagaagccgt gtttctgcct 240
gccgtgtttg tttcatcgtg tttgtgtctg tctgtcgtcg tcgtcttcgt ggttttgaac 300
tttctctaga ctgaattttg tagcggagtt aaatttttag ggatgtgccg tggagcatgc 360
tatctttatt gttatcctgc atatcgtcgc cgccgcgaga accggtgcga cgcttatcta 420
gccccaaagg ctgaagacat gg 442

<210> 2827
<211> 420
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-B10
<400> 2827

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ctattcttgc aaggtctcgg aaacggaaag gcccctgctc cgctgcgcgt ttgcgagttt 120
gggaagaagc cttgcctgcc ggaggggggg aaacgggcga gatggggcga gggcgcagcg 180
agataaagag gatcgacaac ccacgcagc gccagtcac cttctacaag cgcagggacg 240
gcctcttcaa gaaggcccg gagctcgccg tcctctgcga cgccgacctc ctctctctcc 300
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agttcgtcga gaggtacgag gcttcgagc acaccaaagt ttggtccgac atccgccaag 420

<210> 2828
<211> 392
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-B11
<400> 2828

cagtcatagt atgaagggtt caacttggaa aggaaggcgg aaagaaggga aatgtggctt 60
ttggtagggg ggagggggca gggagttaga tatttccgtg gaagccaaaa atttggaatc 120

gcttcagcga gaaaactggc gcgcaaagtg tcatcagaca cagtcacctta ttcagaatag 180
 tgtacgatat gtggacatcg caaacgattc agatagctta actcgtgtgt gatgagggtg 240
 aacgtcaaaa gttttgggtc gaatttccat ggttacagtg gtcattccacg tcattgcata 300
 atttgggtac acaaaggaga ctacaacaca cccacaacttc ttaatcgagc aagttcagca 360
 attaaacaga gctagatgac ctaaacaatca ct 392

<210> 2829
 <211> 409
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-B12

<400> 2829

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 caagtccatg tgctacagcc tccatgtcca tgtcctccct ttcttcaggt tctacagggg 180
 agcccaggga agggtcagca gtttcagctg caccaatgca accatcaaga agttcaagga 240
 cgccctcgcg aagcactcgc cggacagggtg cagcctcggc ccggcgcggg gcctcgagga 300
 ggcgagctc ttggctctgg ctgcaaacag ggacctggaa ttcacctaca acaacgagaa 360
 gccgtcgtg gtgccgatcg ccgaggccat ccagatggaa gctgcctcc 409

<210> 2830
 <211> 384
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-B2

<400> 2830

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 ataacacagt tagctatgac tcttcacagt gttttcagcc tctcagccat cggatcacct 120
 taacgtgcga tatagatcag ctctggatcg tctccaggtc atttcgcggg ctgctgctcc 180
 gcagaacgag cgtccatttc tgtacgtaat cgggccgcca aaggcccagg tccagtcgaa 240
 atacttcac gggcatgggc cacaagtcgt ccagcggcat tctccgactg ctcatcttcc 300

gttccgtcct ctgtgccact gcccttccgt cgtccgcgat gtgccgccag gattcgctgc 360
gctgtcgcaa gcttctgttg tgtg 384

<210> 2831
<211> 426
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-015-Q1-E1-B3

<400> 2831

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tactgtcgca gggcttcgcc taagcaccac tacaatatta tcgaggacta tgggtggctgg 120
gggcgccgca cacggctaag aataagatca cgtggatcaa cttgtgtctc tttgggggtgc 180
ccctgcctcc gtatataaag gactaaagg ggggggtgcg gccggcctan gagaggcgcg 240
ccaggagagt cctactccct ctgggagtag gatccccacc ccaatcctag ttggaatagg 300
attcgcgag gggggaaaag agagagagag gggccggccc cctctccttg tactattcgg 360
accaaggag ggggaagggtg cgtggcccat gttgagctgc ctcttctctt ttccactagg 420
gaccac 426

<210> 2832
<211> 249
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-B4

<400> 2832

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ccctaaccgg tcggttaagca gctgtcacac aaagattctt aagatcactg ccgctgtaac 120
cttcgggtcat agtcgcaagc tcctcctgtc gtcgagaagt ttgtcccatg gagtaagcat 180
ttttcaagaa actggccttg gtgggaaaga cacgggtaag ctggaagcga acgaggatgg 240
tctgaaagg 249

<210> 2833

<211> 377
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-C1

 <400> 2833

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 ggaaggggtt atggtggtga tgggtatggc tatgtaaatg aagaagctgg tgggtatcat 120
 ggcatggagc ataatgggcc tcctgtgcaa ggatatgagg gtgatggagg aaggggccgt 180
 ggtcgaggcc gaggtcgtgg acgtggccgt ggacgcggtg ggggtcgtgg ccgtggacca 240
 tttcctcaag gatctcctca agagtagatt ggctggccca tcgactgaat gcgacaagtc 300
 tcatctttgc tagattaatg gctgttgtat ctggttaggt ttatgtttaa agttgataga 360
 gtgactcagt gtggggg 377

<210> 2834
 <211> 395
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-C11

 <400> 2834

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 cccacgtcca cgttagcagc cggcgcgggc accaaccgga aactaccgac aacggacgga 120
 ctgactgatt tcaccagga aactccataa aaccttccaa ttacaaccac caaatggttg 180
 tataacttcc ttcgccggac aaacggacca atgtctctgt gctacggcac gctctcttgc 240
 atcaacaacc ttccttttat atatttcccc ttacagggt atctctagt taaatttcac 300
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 tttctgaccc gagcatcgtg gcacatccac tgttt 395

<210> 2835
 <211> 393
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-C2

<400> 2835

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aacgtaagca tgaagggatc ccacagtggc caatttcaaa ataggcaagt agtacatctt 120

atcctgacaa aaggtggtct tcgcctgcta agcttctggt cgtgtcgtcg tgggtgggctc 180

ggtgatgaca tctatcctac cgtgctggcg atcttgggtct cgttgcaccg aaatggaaac 240

ctttgccaga tgacatccgt cctactgtgc ctgtccttga ctcccttagca ccagacacca 300

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gcgtcactgc tagattgagg gggagagaat tgg 393

<210> 2836

<211> 193

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-C4

<400> 2836

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ctacatgact taggcggact tatcccatgt gtgtaggtac aagtgcggcc aactggggtc 120

tttcgatcaa ttcagcgtcc gtccctacatc agtatccgta tcgggataac gtttaattca 180

gtaatcttct aca 193

<210> 2837

<211> 250

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-C5

<400> 2837

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ggaaatctcc cattcatgct gcgcgaacag ggccaggcgc ctacaggtgg ccccatatct 120

ctcctcggac agcacgggtg gcacgcccgg cgccagcagg cgttcgcggc gaaattccgt 180

gcgcgcggcg ttttccgcat cccagccctc caccagcgtg tcagcctggc ccacggtcgt 240

gctgtacgtg 250

<210> 2838
 <211> 421
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-C8

<400> 2838

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ggaacaaacg taactactca caaagcatat tcatgttcat aattagaggg gtaataatgt 180
gcataaagga tctgaacata tgatcttcca ccaataaac caactagcat caactacaag 240
gagtaatcaa cactactagc aacctactag caccaatccc ggacttggag acaagaattg 300
gatacaagag atgaactagg gtttggagat gagatggtgc tgggtgtgat ggagattgtc 360
ctctcccgat gagaggagcg ttgggtgatga cgatggtgat gatttcccc tcccgagggg 420
a 421
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<210> 2839
 <211> 420
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-D10

<400> 2839

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ggcggggcgt ctttttcctg aggagagcat aagcgttagc gcgactcgag ggcataaacc 120
ctaaacgtta aaattgcgcg ccataccggt gtgccggagt ctcgatctgg tccgcacttc 180
tttttatccc gcctggcttc gatggcccat gttggctacc caccgcgggc tcggccctcc 240
gccgcaagga tttcccctgc aaaacgaaac acaattgggt tttgacaaac aaaatgagca 300
tggatggatc ctctgaagag tactgggact tcgatctcgg tcacctttga ggctggaagt 360
agtccgggat aatcggtcgt aatggccact aagggtgttat ccttccttaa ctgaagaaac 420
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<210> 2840
 <211> 416
 <212> DNA

<213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-D12
 <400> 2840

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ccccgggtcga cgacgaaccc tactacaccg tgatgtgact actactacgt gcagccccgct   60
gacgacgacc aagagtagtt aggaggatcc catgcaggag gcctgcgctt cgttcgatct   120
gtatcccagt ttgtgctagc cttcttaagg cagacttggt taacttatgt ctgtactcag   180
atattgttgc ttccgctgac ttgtctatga tgcagcactt gtattcgagc cctcgaggcc   240
cctggcttgt attatgatgc ttgtatggct tatttatggt gtagagttgt gttgtgatat   300
cttaccgtga gtccctgata ttgatcgta acgtttgcgt gcatgattag tgtacgattg   360
aaccggaggc atcacagtca tatcgttgca gtgcttaggc gaagccctgc gtcggt      416
  
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<210> 2841
 <211> 378
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-D4
 <400> 2841

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atatgcactt atgattggac ccctagcaag cattcgcaac tactaaagat cattaaggtc   120
gtgaaactca accatagcat taagtatcaa gtcctctcca ggggcattcg cagatctgcc   180
acgcagcgta tctgatgctg cggagttcta ccatgccgag gaggggagct caacggagaa   240
actgctctgg tcccagtatg ctggagccga acacttgatg cctctgagtg accaactgaa   300
gcagttggtt gaactccaca ggggtggcga agtgggcagg catagatttc atagtccgga   360
tgtggcctgg tgagcccc                                378
  
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<210> 2842
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-D7
 <400> 2842

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ctcgtctcca ccacccaact tgcccccgga ctccaggagga tcgtcggaga tgtcggacac 120
cgatgagcac cacttcgagt ccaaggccga ctccggcgcc tccaagacct acccgagca 180
ggccggcgcc atccgcaagg gtggacacat cgtcatcaag gcccgtcctt gcaaggttgt 240
tgaggctctcc acctccaaga ctgggaagca tggtcacgca aagtgtcact ttgttgccat 300
tgacatcttt aatggaaaga agcttgagga tatcgttcct tcatcccaca actgtgacgt 360
cccccatgtt gaccgccaag attatcagct gattgacata actgatgatg gatatgtcag 420
c 421

<210> 2843
<211> 405
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-E11
<400> 2843

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tcggacaatt ccgagaatca gacctgcaa tatgagaggt taaatgcaag aaacgagaat 120
aaggcccatg ccaaggaagg cgagggtcct gcggtctggct gctgctaagg atagcaggca 180
gtagagaagt ttctttctga tttgaagtgt gcagattggg acagctcgct ttctgtgggc 240
aaccagctga atgctaaaat gtcataaatg gctgtgaaca gatcggatat gattcgtaca 300
tcagggtcga agatatgtgg ttttgatta tggtagact caagatatgt gacctccaag 360
gaaactgcaa actcaagata tgtggtcttg gactagcaag atttg 405

<210> 2844
<211> 420
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-E12
<400> 2844

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cgagatgatg tccatattcc taaactgaaa ttgaatatcc caccatttga gggtagatat 120

gttcctgata tatatcttac ttgggagtta gaaactgaac aacattttac atgtttacaa 180
tatcccagg agagacgggt tgctgctgct gtttgctgtt tcactagttt tgcattgtgtc 240
tggtggtctg aacattgtag attatattcct attccaacta cttgggctgc tttgaaaacc 300
gctatgcgta cgcgttgggt tccaccatat catcaatgtg aattgcttca aaaattgcag 360
cgtttaagac aaggaaaaaa ttctgtagaa gaattattatc aggaattaca aactggcatg 420

<210> 2845
<211> 381
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-E6
<400> 2845

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actgctaccg agtagactca aagattgggc cgcgagcgtg tcggcaatcc aggacgcgga 120
catcagacaa gaattctttc gcatccagtc ggagtttgcg gaaatcatcc atcaagatgt 180
ccttcgtacc tcggggtcgt tctacctcag aaatcaacag tccaacaatg acatcgacac 240
aatcctacaa atgcaggctg acaacgcccg tggtttcatg actcccacga tagacggcgg 300
cttcatccac gctccggtcc cttgagtcga gtcgaaagca gtgatgctgt gtctagttcg 360
gaaacatcga ttggctcatg t 381

<210> 2846
<211> 308
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-E9
<400> 2846

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agacgaggag gaagaagaag aagaagaaga agaagaagaa gaagaagaag aagaagaaga 120
agaagaagaa gaagaagaag aggaagaaag aagaagaaga agaagaagaa gaagaagaag 180
aagaagaaga agaagaagaa gaagaagaag aagaagagga agaacgaaga agaagaagaa 240
gaagaagaag aagaagaaga agaagaagat gaagaagaag aagaagaaga agacgatgaa 300

gaagacga

308

<210> 2847
<211> 390
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-015-Q1-E1-F1

<400> 2847

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caggggctaa accagatacc acctatatat aggctgcgtc catgggggacc tctttcncct 180
taataaccga ttggttaaccg gagtggggaa gaacggtggt ggtgtatgtg atacgaagct 240
gctgagcgtg tgcacatatc tgtaccggct ttgctcacia atagaaacat gtaaagtggc 300
ttaggaatcc gaagtagtat tgtgtttatg caccgctata gatgcacact ataattgatt 360
tcggactcgc tgggacgctt agtcccattt 390

<210> 2848
<211> 426
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-F11

<400> 2848

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tccgcacgaa tcaccgctct cctctagctg gagcaataag ggtcaccgag atgaccgggg 180
cagacctggc accagtaatg gagttgaagg ctgtggcaaa tggaggaaca cccactgaag 240
ttgttgcttc tgataagaag gataatacca agatggaaga ggctgacgag agcaaggatg 300
ttgcagtagc gaataccaat gctgaccaac agaataaagc ctcagaaaac ggcgctaagg 360
gctcatctga tgatgatgcc aagatggagg aggctgaaga tgcaaaggaa gatgatgtgg 420
gtgctg 426

<210> 2849
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-F2

<400> 2849

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 agttcgctga gcggaacccg gacgtgctgt tcctgcaagt caactacgag aagcacaagt 120
 ccatgtgcta cagcctccat gtccatgtcc tccctttctt caggttctac aggggagccc 180
 agggaagggt cagcagcttc agctgcacca atgcaaccat caagaagtgc aaggacgccc 240
 tcggaagca ctgcgccgac aggtgcagcc tcggcccggc gcggggcctc gaggaggcgg 300
 agctcttggt tctggctgca aacagggacc tggaattcac ctacaacaac gagaagccgt 360
 cgctggtgcc catcgccgag gccatccaga tggaagctgc 400

<210> 2850
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-F3

<400> 2850

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 ggccgcagac gatggaccag cgtccgcgat gacgacggac gttcgccatg acgacggacg 120
 tccgcggcg agcccagcga agccttctgg ccacatgcta catcaacaat caaccccagc 180
 atccttcttt gttaacgaca tgtataatta atcttctcac ttttctctc ttttcatctc 240
 ccgtttcagt gaggagcgac gatggagagc gcgccccggg gaaggagag gaccaagagg 300
 agatgctact ggcgcgaca taatcggcac cgggtcggag caacatgaaa gaagaatgca 360
 tccgcgacga cggcgggcggc aggagtacgt tgccaacgac gggcaggcgg ccg 413

<210> 2851
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-F4

<400> 2851

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tgtggcagag caagcagttt cagcgctcta tcagtctaac gtcggatgct gggcaacaag 120
gaaaactctt acgagatcaa caacagcacc gctcctaattg tttcccgagg gtcaccagtt 180
ttaccccatc aggaacattg tggagcaaca attggaattc aaacaattca gtattccttc 240
gcaccaggta acattgtagg gattctaggt gtgcttgggc aggagtttag gcacaaataa 300
gtgaactata ctgaggaccg gctactgagc cataatgcta cccctttccc tatgttctct 360
actatctaaa aaataagtga gggtagcaag tgcgagttcc tcctccaagg ttttc 415

<210> 2852

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-F8

<400> 2852

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aagccaaagt cgcctgtagc gaatggtgtt aacggggatg cgaaggttcc ggcagagaaa 120
gccgctgcca ccgctgtctc tccagccgtt acctacgcgg cgaagggtggc ccaaacagca 180
gcgcccgaga agaagcctgc ggcgaccgag aagaagcctg tcgttgccaa cgggtgctgtc 240
aagaccggtg tagctgcttg atcgcatacc cgatcctccc agctagccat gaagaacaaa 300
cggacgggtg tggcgaacca ggcgagacat gcgggggtccc aaggtagtga tcaccaaagg 360
tggtgctggtg aaagcgggtc ggatagttag gtttccctag ctctctccct ttt 413

<210> 2853

<211> 415

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-F9

<400> 2853

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gaagctgggtg cagattgaac atgcactcac agcgggtcggg tcaggccaaa cctcccttgg 120

catcaaagct gccaatggtg tagttatcgc caccgagaag aaactgcctt ctatTTTTtagt 180
ggacgaaaca tctgtgcaaa agattcagtc gttaactcca aatattggag ttgtctacag 240
tgggatgggt ccagattttc gtgttcttgt cagaaaaagt cggaagcagg cacagcagta 300
ttatcggttg tacaaggaaa ccatccctgt taccagctt gtccgagaga ctgctgctgt 360
tatgcaggag ttactcaat ctggtggcgt aagaccattt ggtgtatcac tgttg 415

<210> 2854
<211> 440
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-015-Q1-E1-G1

<400> 2854
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ccaagcccac aacttacttt ggcctatatt cgacccatat tttagttggg ccttttTgtg 180
acccatcact tagattggcc caggtagcgt tgggccatta acaggctgaa tattctactg 240
gcccgttacg gcccanaaga aaccatgggc ctttagtagg ccgaaatgca tgTtgggcct 300
caattttcac tagtcatcga cgggccttca gtaagctaaa atgtagaccg ggcctTTTTt 360
ggcccagtta tatgataagc cgTtactagg ccaaaacata tcttgggcct tagttggccc 420
actgaaatct tggcctttaa 440

<210> 2855
<211> 422
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-G10
<400> 2855

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tagctgaggc tgacggggat cagatcacag tgaagggggT tgatgctcgc caccctatga 120
tcgttatgct gcatgacacg ctgtttctga agatcaggcg gcatcagcaa gcaaggagct 180

ggttttaaacc gctttggcct gagggctttg agtaaaccgat acagccccga cgagcacgcg 240
 acgagcggca tgggtactgag attgtccaca cgtgaaacaa tgagcttgat tacctctgtg 300
 gggagcgaat tccggccact ctttcggcgg acgctactcg gttctgccat tgtagtgct 360
 tgggttttcgg acgacggggg aggcgcctta gcggggatgg aagcttggac cagattatgt 420
 tc 422

<210> 2856
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-G12
 <400> 2856

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 gaatatcaat ggccacgtaa tctggagtcc acctctcttc catcatacga cccatcgatt 180
 caaaggcctt ttcaggcata ttctatatca cgaagtctct tcaacaataa ttatctgatg 240
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 cactactatc tactgaccag ctgagcactg atataactgc tttctgcact cctcaataat 360
 ggcgctcatg gatgcaaaca ccagaaaaag gaactgatga gtacccaacc aacag 415

<210> 2857
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-015-Q1-E1-G3
 <400> 2857

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 aagcagtttg aatggttcta gaacaagtac catccataaa atattgcgtc cattgtaatg 120
 agtgattgct tcgatctatt tagaacttca tagtttcgac aggtcatcta aattgcttct 180
 acagtcacaa caaccagaat tgctcacaaa tgtatgcttg acaatagcaa acaacgacgt 240
 aggggacaag ctggcaatga catggaattt ggtatttgca tcgattaaat tgggactttg 300

cttccaaaga atttgggtatt tgcatacctaa gaaacgagaa tttccttccg aagaattagg 360
aacctccatc taaaaaaaaat gaagatttgc ttccaaacaa caaaaaatga tgcatatgga 420
caggatttgg cccaa 435

<210> 2858
<211> 412
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-G4
<400> 2858

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ttgctgtaca cgccttttgg gagaagccca cttgattaga atttattaga atactctatg 120
tgcttcactt atatcttttg agctagataa tttttgctcg agtgcttcac ttatatcttt 180
tagagcacgg cggtggttta attttgaaga aatttttgat ctctcatgct tcacttatat 240
tattttgaga gtcttttaga acagcatggg attttctatg gttataaatt ggtcctagaa 300
tgatgagcat ccaagtggg tataatagaa actatcatag gaagtgaatt ggatgctatg 360
atcaatttga tacttgataa gtgttttgag atatggaggg agtgatatta aa 412

<210> 2859
<211> 363
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-015-Q1-E1-G5
<400> 2859

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gataaattaa agttcaatta atcatattag ttaagaactc ccacttagat agacatccct 120
ctaatacatg aattgctcac gtgatccaaa tcaactaaac catgtccgat catcacgtga 180
gatggagtag ttttcaatgg tgaacatcac gatgttgatc atatctacta tatgattcag 240
cctcgacctt tcgggtctcag tgttccgagg ccatactctgc atatgctatg ctcgtaagt 300
ttagaccgag tattcttcat gtgcaaaact ggcttgagc cgttgatatgt gaagatagag 360
ctt 363

<210> 2860
 <211> 406
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-G7

 <400> 2860

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gagaagcttc taatactgat gatatgacct acaggggaagc attcccaaatt cagtggcagt  180
gaaagcacc c tgagtaggtc tttcttcata attaacagtt ttgttttgct gtgctgttgc  240
atgcttgaag tgcttgaagt acgcggggca ctgaatctgc ttcgaaccgc tgcattggaaa  300
atttcagaaa ggaaagtcgt agaccatttg tattggcagt cggattgaga atccatatca  360
taacaacgcg acagtagata agcactcgat tttgtgaaca tgccaa                    406
  
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<210> 2861
 <211> 396
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-015-Q1-E1-H12

 <400> 2861

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gatgccgtgg tatgtcgtgt acaagggtaa ggttcccga gtctacgacg actgggagga  180
gtgtcgcaga caggttcacc gattcagcgg caacagttac aaagggtagc ccactagggc  240
cgaggccgaa tctagatacg cccgctatct agcgggagag gggagggagc gttggaggaa  300
ccggatgaag acgagcttca tcgtgatgac tgcagctctc ttctatgtga tggtagttta  360
gatgatcgat atcgacttgt aatgtgaaga caaact                    396
  
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<210> 2862
 <211> 369
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-H4

<400> 2862

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tcctctgggt ccttggtgcat tattgggttg tctcaatttt cagtttgga cacttagcta 180
tgaatatttt ttgattaat attgatgctg ttgttacata ttggtactgg gaagatttta 240
tgtattattg ctgagctctc atgagcaggc ctaattttac agatgtttag tgcaccgggt 300
cctgttcatt tacaacacag ccctgtgatc taattgatgt ttccctgaat ttatgacagg 360
taaactgca 369

<210> 2863

<211> 353

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-H5

<400> 2863

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cgtgatggca gcgttgatgg tggaggtcgt ggcgtggtgg cggctttgat catggaggtt 120
ctgtttaatt ccccgggggt gtcacgctg ggctgtcaaa tcctgaaggg aggagtctgc 180
cggcagaaca tttgttttga accgtagatc tgtttgtagt acagtggatg taacatggac 240
cgttggatgc aaccatgtgg gtttgatcag acctgtggg ttatcctgtg tgcactttct 300
tgggtgcacg tatgggaagt cacgtttggt catttaagag tagtatatat aca 353

<210> 2864

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-H7

<400> 2864

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atcaattgaa cgcacattta aaggagttgc aaggcacttc cgcaagtgt tctctgaatt 120

agtgcaaggt ggtcacggat acttggttat gatgaagaaa aaggatgggtg atgctggcga 180
 tgatgacatg gatgaggacg tgcctcgtga agcagatcct gaagggagga tagagaagta 240
 tattggtgtg aaagtcaagg tttccttcac tggcaaggga gaaactcagt ccatgaagca 300
 gttgtctgga ggacagaaga cagtgggtggc attaactctg atctttgcta tccaacgatg 360
 tgaccagct ccgttctacc tgtttgatga gattgatgct gctctggatc ctcagtacag 420
 aacgggtgtc cgg 433

<210> 2865
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-015-Q1-E1-H9

<400> 2865

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 gcaggctgac aacgcccgtt gtttcatgac tcccacgata gacggcgggt tcatccacgc 120
 tccggtccct tgagtcgagt cgaaagcagt gatgctgtgt ctagttctaa aacatcgatt 180
 ggctcatgtt gtaattaaac tttaatgaac ttgtagtatg tctctttggt ttcgagagtc 240
 gttcaactta gatgtaatcg atgctattaa tgtcttgctt ttctcttcog atcattctgt 300
 tgcatacgta tatattgctt atgtattgtc tctgaattgg tactaacgtt tcgtttggtt 360
 actgcatagt gatggcgtgg tatgtcgtgt gaaaggggta aggttcccgg agttc 415

<210> 2866
 <211> 397
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-A10

<400> 2866

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 tgggcccctc ggtgtgtagt ttgtagcact ttaattagtg ggtcaaaatt tgttccattc 180
 caagtggact atcgggtgtg agttttgtag cttatttata ataattaaag agaacaacat 240

agtttttttca ataataccat ggtgcgacgt tgaaggtgag aaaggacgtg cgagagactg 300
atggcccagc cggagggaaa tcaactaggg gagttgcgtt ggttgcaacg gtgtttggag 360
tagttgtggg ccgaatgcta cgaaaatata atctaaa 397

<210> 2867
<211> 384
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-A11
<400> 2867

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ttgtgctgaa gctgcagtgc cagagctgca agcactactc ccagcgcgcc atcaagaggt 120
gcaagcattt tgagatcggt ggagacaaga agggcaaggg aacatccctc ttctagattg 180
ctttcaccta tctgtagtca ttgtgttcaa gaactattac tacttgctgt aatgttttga 240
tgttatgagt tgaatcaatc atgtatccaa acccctttat ctggcatttg agcaacgata 300
gacttggcag aatgatcttt tgtagcttga atcctctttt aatctcaggc attgccgtaa 360
cgtggatatg gatgtcctgt gccc 384

<210> 2868
<211> 429
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-A12
<400> 2868

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cccgtaggtag acgatcctcc ctccaccaag tggacaacca gtacacggtc aaattaccac 180
gtgggctgcc ttttcgtaca gaaatgagct ccaccatgtg cccgcgcggg tgtgggttcgg 240
aaagagacgg gactacgtgc gctgtgcgtg cacctcttct cttcgtgcat gtccccacc 300
taagtgggtg tgtgtgagac atacaaacct agacaaatgg cttgtgtgga ataactactc 360
ttcgtgaagcc attgtaagag tggacaaaat ggtgaaggag acgatagggg agccggcgag 420

gtgtgcccc

429

<210> 2869
<211> 356
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-A2

<400> 2869

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tgacatcaaa ctccatcata atttgtggga gaaaaggata acagatgata catccaccga 120
attttgcgtt tgcaaaacta tagccaccaa tacacatgca accttgggtga atatggaaca 180
gtgttacatt tattataaac ataaagtccc tgggggtcaaa agcagttgtg tctcgaactc 240
tcgattcatg gttggaaaag agtatacgtg caaacagtac aataacaaat ggattgacct 300
gtttaactcg atccttttat ttatacaaca gtagaaatta aatactacta tgctga 356

<210> 2870
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-A3

<400> 2870

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gtaaacctct atgctcggca aacatttcca attgtggttt ttccattcga ccatcccctt 180
gacttagtga tcatccttgc agaattttgt caaaactttg aagaagaaac tagccggctg 240
gagccaaacc tcgaccccggt caattctccg gtgaacgacg aagttgccat ggatgttttc 300
tgactggagt ctggtgttgc agctgtcgtg gactatctcg caaggctgaa ggccgccaca 360
tctcgcatcg actcgacgct ctggcctgag gagacacttc ataatgacct tgagtcgttt 420
aagggcg 427

<210> 2871
<211> 148
<212> DNA

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 agcagaaata ttcttaattt agtgtttctt gaacatggcc agggcaatgg ataaaatcta 360
 ctctggatag ttgacagagg gagtacatgc taagttgact ttttctctgc ggattt 416

<210> 2874
 <211> 416
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-B11
 <400> 2874

ggttctaggg tcgacggaca gtgatttatc aaaaatttag atatctacaa cccttctctt 60
 cctaaacgaa actgacattg caaaagtaga agtataaggc actagctgaa tttattctag 120
 cattctaaaa aaaatgaatt tagtctagcg cgccctccag ctgcacatt cataacaaaa 180
 ttccatgcaa aacatagaat tagttgaacc atatattaag caaaaaacaa atactacatg 240
 cagaaacata ttttaaaaaa taaagaacta ctaaattggt tttttacttt acatgttagt 300
 ttttcccttt ttgcaaaaaa tgatccaaat atattataaa aggtgcagca gtagtataaa 360
 gcatctcaaa catcaataaa attacattaa gggacctgga ccatcgaaca acaact 416

<210> 2875
 <211> 406
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-B12
 <400> 2875

ggtcgacggc ttgccccaaa ctaaggcgca ccataattgc aaacaaagac atagatggat 60
 agagcactac aagattaaca aaacatcctt actgatcatc ctcaaaagag gcacggatca 120
 ctaggaaca acatgaacat aaggccatat gagacaaaca gctcaaggac ttagtgga 180
 tgctaagtcc ctgaaaacag aattaacaag tgaccactt tgcaagcttg cactagtcac 240
 cacacacatc aaaaaatac atgggttgca cctctggaaa gatgacaaaa cccttaacaa 300
 aacacatgta gagcatcagg gcatatcatg cacacaataa tcatggcaaa aatgacaaaa 360
 acctaaatgg agcagcagat ctgacaatta tctcaagtaa cctccg 406

<210> 2876
 <211> 394
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-B3

<400> 2876

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 atggagctac aaggaaatgt acattttgca cttccacaac gaagaagcgt gcacacatca 180
 gtgaaagtat ccaatcttgc tggaggtcca agcaacatca cgttcagtga ggatcctgta 240
 gcgaagacag caaagaaaat ccacaaccag aagttccaac agctgacagg caataacatc 300
 tttaacgagg atgctcccc tggctcagct gacaagtctc tgagctcagc aaagcttaag 360
 gagatgagcg gcaatgacat cttctctgaa tgaa 394

<210> 2877
 <211> 408
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-B6

<400> 2877

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 aaaggtcctt gaggcaaca gttcttggat gaatgatttt attcgccaat accacaacgt 180
 gaacataaat gtagctgtac aaactgagca tggattgttt gttccagtag ttagggatgc 240
 cgacaagaag ggacttggtg caatcgggtg ggaggtgaag cagttggctc aaagagcaag 300
 ggataacagc ttaaaaccac aagattacga ggggtggcacg ttcacagtat caaacttggg 360
 aggtcctttt ggaattaaac aattctgtgc tattagaaat cctcctca 408

<210> 2878
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-B9

<400> 2878

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cggagctatg ccggcaacaa ccaggaaagc agtcaaggct ctgcgatgc tttccctgtg 120
ggagatctgg caggagagga accgttgcac ttttagggca aaagaggcca gtgtggctga 180
tgtgtacttt gcaatcagga gaagcctaaa cctctggcag caaggcggcg tcaagttctt 240
tcagagcccc ttcggggacc ccccgaggaga gtaggctagt ggattgtgcc aggggcactt 300
tgctttcttc ttcattcttc ttccttctct ccttgatctg cggatcctcg ccttgtcact 360
tttgtcatct gtcctctgct taataacaat gaaacaccag cctttgtctg tccttaaaa 419

<210> 2879

<211> 155

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-C1

<400> 2879

gggtccacgg caatggttca aaggtaaagt tgatcgccgt ctgcacgcta cctctgcatc 60
tcccttcggg attagtttta aagcttaata attgttattt agtgccagct gttagcatga 120
acattggtat cgggatgtcg tttagtttga gatgg 155

<210> 2880

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-C10

<400> 2880

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ctagggtccca tggaagaaat gagaatgaaa ttcaaacatc tgggcgtcat gactcggccg 120
agaacatcga gaaactttga ttataaatcc atgtaaatcc aaaactcgcc tggaaatcat 180
gaaacttggc atggtgtcat gtcatggcac taacatgttg tggtaaaaaa ttgtgccgat 240
tggaagetca tgggttctaag agggaacgtg ccacctttga gtgtgaaacg atatacgctg 300

cccccccttg agtttcttaa caaaggcaac atagaactac attagtgcc tgtaaattt 360
 tggaattatt ccgggttcgt ttgtcgtttt ttatacatta attgagtt 408

<210> 2881
 <211> 408
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-C12
 <400> 2881

tacactaaat tgagtcgtat tatttaaaaa ctgttggcag cattaaaaaa atgttcacat 60
 gtttcaaaaa atatatccct gaaagaatgt ttatgtaata aaaaattatt cgtgtagttt 120
 tataaaaaatg tctcaacgtg tattcgaaaa atgtttaaca ggtatttttag aaaatgctca 180
 acaacatgtg ttttaagaaaa aaatgtgtaa aaaatgttta aggtgtatac aaaaaagata 240
 caatatttca gcaaaaatag acatcaaaac atatatttga aaaatataaa tcccgtattt 300
 gcaaaatgta aaacatgtat aacataatgt tccataaata tacaaaaatt gtataatatg 360
 taagaaaaaa atttagacgt gaaaacatat atttgaaaaa atgttaat 408

<210> 2882
 <211> 312
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-C4
 <400> 2882

ggtcacaaat tatcgggtcg acggctatgc tatgcctgat ttggtacatc gttaatgtgt 60
 gttgtactga tgatgcatta tatgtcttca catgttcact tgggagatat ttcataatcc 120
 gccagctgaa ataaatatac taccattaag ttttgttcac atgtacgaat gtcgtcgtag 180
 atgttaactt ttgttccac attggctcta taacataaccg ttgatctaatt gcattgcttc 240
 tctaaccaat tgttttcagt tgcgggtcaaa taacaattgt acgtaccgct gaaatgtcag 300
 tcatgatcag tt 312

<210> 2883
 <211> 404
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-C5

<400> 2883

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tacacgctcg gctacaagac cgtcctcagg accctcagga actccaaggc aaagcttgtg 120
atccttgcta acaactgccc tccgctccgc aagtctgaga ttgagtacta tgctatgttg 180
gcgaagatca ctgtccacca ctaccatgga aacaatgttg atttgggaac tgcgtgtggg 240
aaataacttc gagtctgctg cctgagtatc atcgaccctg gcgattccga catcatcaac 300
gcaacaccag ctggccacta aacctgtgta tgccattttc agtgtctcgt ctgatgcgtc 360
atctaagggt gttctagagt gtagttcttg ctggacttga ttg 404

<210> 2884

<211> 281

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-C9

<400> 2884

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gaccaggagt agttaggagg atcccaggca ggaggcctgc gcctctttcg atctgtatcc 120
cagtttgtgc tagccttctt aaggcaaact tgtttaactt atgtctgtac tcagatattg 180
ttgcttccgc tgactcctct atgatcgagc acttgatttc gagccctcga ggcccctggc 240
ttgtattatg atgcttgtat gacttattta tgttttaaaa a 281

<210> 2885

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-D11

<400> 2885

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tctatccacg gcattcttgg ttctgcactt agtcttgaac ctgtgttggg ttggggacgtc 180
aatctcattc gtcagcgggtg tgtgccgctg actatgattg ctttcttctt gctgtcaaata 240
cccagtctat ctttctactga gcttccttcg cttggaattc agagtccaaa agtaagaaaag 300
aaagcgtact gtgaggtatg aatgatcaaa tgtctacagg tgcattgaa tatcatgggg 360
tacgaacttc taaggctatg gtgtatggta ttggataggc tgggtccgctg gtcgaagtca 420

<210> 2886
<211> 434
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-D12
<400> 2886

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tggagcgtct tgtatgattt gagtctttgc ttttttagttt accacaataca tccttgctgt 120
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acggtgggtga ttttatttta tagaaattat tgatctctca tgcttcaact atataatttt 300
gagagtcttt tagaacaaca tggtaatttg ctttggttat gaaattagtc ctaatatgat 360
aggcatccaa gatggttata ataaaaactt tcatataaag tgcattaaat gttatgagaa 420
gcttgatact tgat 434

<210> 2887
<211> 441
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-D4
<400> 2887

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tgagtacgag gagccgatgg agcagatact ttggcgctca cttctccacg acgttggtcc 120
ggcggcgcca ccgaagacgc tcctccgcgc cgtcaagtca gacctgttgt cgctcctcgc 180
ctgtcgggtg aaggccgaac cgccttcctt tcctgctct ccaccgcgct atcatggcat 240

tcaaatcgga tgccacgtca aggtggagcg gttgtcgcca tctcctcgtc gcgtcatgga 300
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 ctacctcggt ggccgcaaaa a 441

<210> 2888
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-D8
 <400> 2888

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 tctcaccctt ccaccattgc taacctctct agtatcgcg aactttcgcc ggtaccataa 180
 acccaccata taccttcttc aaaacaacca ccatacctac ctattatggc atttccatag 240
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 cattttcata ttgcttgcac gatcatgtag ttgacattgt atttgtggca aagccaccgt 360
 tcataatttt catacatgtc actcatgcat cattgcacat cgcggtacac tgcaggaggc 420
 attcacatag agtc 434

<210> 2889
 <211> 397
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-D9
 <400> 2889

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tcatctagtt actgtggcaa tgacaggtca tgcagaggaa atgggttcaa ctaccgtagc 360
acacagcagt ttgaattgcg ttgtcgtaat gcagtaa 397

<210> 2890
<211> 400
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-E12

<400> 2890

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gcgacagggt gttggaacaa gacgtgtgct gacattgcct attgaggtgc accctatggc 240
gcaaacgcca tgtacgcagc cgagaaggcg tatgtgcccc cgttacgcct tccgggaata 300
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aaacctgttc acaccgatca aaacctaacc gggttccac 400

<210> 2891
<211> 260
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-E3

<400> 2891

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gatcaatagt gtgtctattc ttgttgata ctggatcaca caagtaccag gtattagtgc 120
accaaagaaa agaggttgct acgtgttggt tgaataatat attggtcaaa ttagtgtacc 180
attagaatct taattcgtgc tgagcatggt cttttattac agaaagtgtg acactttata 240
aaaaaaaaa aatacaagaa 260

<210> 2892
<211> 389
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-E5

<400> 2892

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tcgtggcact gatggcgaat gtaccaccag tgccatcctc cttggcggac tccttctgag 120
tctcaggatga agctgccaat gccatcatac acttgccggt gtatctcgat ggtgcatcct 180
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cggacttggc cgtcttcttc cccccgggag cttcaacagc aagtgtgcta tgatcaattg 300
cagctgctgc ttcacggtac atcttgtctg cgcagatata ggcatccttc ctgtcgccgg 360
ggacagagat gacccgtaac gggcctggc 389

<210> 2893

<211> 449

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-E6

<400> 2893

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aaggaggcat cctaatactt tcaggcaaaa gtataaacat agcctttata actcaaatag 120
cattgttatt acaatcgaga tacatgtcac tcgaacatga cactcttcga gcactgagcc 180
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acggccggat tctggcttgg aatcgcggtg gcctccatct ccgcccagta tgtcttgaca 300
cgggcaagag ccatccgagc accctctatg cagcgcgacc tcttttcagc gtcgatatgt 360
ggcacagcac caaggaatca ttgcacaaga ccaaaataac tattcgggct tggtccttcc 420
gggcagagac gatccacgac agacctcat 449

<210> 2894

<211> 412

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-E9

<400> 2894

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tcaccaaatt gattctcaaa ccatcacggc tgattcattc cttcccattt ctcttcgtgt 180
acgtactggc acagtttacc gttgagcaga gtgcgcgac gcgtccgtcg cattctcaag 240
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<210> 2895
<211> 339
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-F3
<400> 2895

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cttcgctctc ctctcatct ttttcatcca atgagctcac agtttcatca acttcttatt 180
ccatagattc ctgcaaaata ttagtctctt cttggacaac ggagactttc tcaataagtg 240
cattaatatc ataattgtat tcataattct cataacaatt attaaggata tctaaatttt 300
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<210> 2896
<211> 308
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-016-Q1-E1-F7
<400> 2896

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agccctgcat catcagtgat actagcagtg tcctcagatg aggaattagt gatagcagag 120
acaggtgaag aatttgtagc attagaagca tttgaacatt caggtgaaga attagcagat 180
tcacgttcaa tgcacttcaa acatggagga acaaattctt cctgagcagc gctgatttgt 240

tgagcaagta atgaatcgcg ctccctctga agatcttcat aactcagcct tagcttttca 300
agatcttg 308

<210> 2897
<211> 385
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-016-Q1-E1-G10

<400> 2897

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gccaaaagga atgaggcgcg cccccccct ctggtcncaa ttggacaagg ggtgcagccc 120
ccttttctct ctccctctcc ccctctttcc ttctctccta ctccaacaag gaaaggagga 180
gtcctactcc cgggtgggagt angactcccc ccttggcgca ccctcctcct tggccggccg 240
cctccccctc tgctccttta tatacggggg cagggggcac cccatagaca caacaattga 300
tctcttgatc tcttagccat atgcggtgcc cccctccacc ataatccacc tcgattatat 360
cgtagcggtg cttaggcgaa accct 385

<210> 2898
<211> 410
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-G3

<400> 2898

gggtcgacgt gtgtctataa agggactacc cggaggcgat tcagggacaa gaaacaacaa 60
ctcgagagcc aggtaaagcg gattcgctcc ctgatcatcg agaccccatc aattccacca 120
caacgggatc gtaggctttt accttcaccg caaggggccc aaccagtata aactccccgt 180
gtcctttgtc cggtttaacc ccttttaagc taatctcggt gcgatggctc cagactaag 240
tcctcacact aggacatctg acgtgataat tccacgacac catgggtgag agtcaagcca 300
tcatgtgtgt caagcgcttc gcaatcgaa ttgtgtaagt gtttgggccg gagtatttga 360
gagctcccaa tggtgaagat gccgcaaagc ttttggagat gaacaaagct 410

<210> 2899
 <211> 387
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-016-Q1-E1-G8

 <400> 2899

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 tagagggatg gcctggccag cgggtgggagt agtaggggag gtgaggcctc cgcggcacatca 180
 cagccggcca cgcccgccaa gaaggcccc gccaaagaagg ccaagaagta gagcgtctcc 240
 gtcctccgc aacaagtttc cattctcctg ttctgtgtcg gtggtagtcc aggattctgt 300
 gttctagact gtaaatttta tatccgggtt gtgggtgctc tgggttcattc cggcgtaccc 360
 ttggaggtgt atctgtgggt gaaacga 387

<210> 2900
 <211> 431
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-016-Q1-E1-H1

 <400> 2900

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 aagggccaat atgaccgcaa acataagctc atgacttatg aagtcggcga gaaggattac 120
 cttcgggtta ctcttttaa ggggaacccat cgtttcggtg tcaaaggcaa gttggctcct 180
 cgttacattg gaccctttcg cattcttgcc aaacgaggag aagttgccta ccaattggaa 240
 ctacctcgc atctttcctg agttcacgat gtcttcacg tttctcaact caggcgttgc 300
 ttcgcgatc ctatccatgg ggtggaccac gaaacacttg atctccaaga taatctcaca 360
 taccgggaat atcccggtcg tatccttgat caagccgagc ggtacactcg acgccattac 420
 atcaagtttc c 431

<210> 2901
 <211> 429
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-H11

<400> 2901

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aactggaggg gcttgatact acggtgggtgg cgggtggatac ggtggcggcc gtgggtgggtgg 120
tggaggtggc tatgggtgtg accatgagtc ctactaagaa gagcactggc tatcaaattt 180
aaaataatga agtttttagg acagtgtctt gattatgtgg aacctaattg tacgtcgttc 240
tatgttcttt ttggttttgg tttgtttctt gatagtgcaa gagttaattt gtgtatgctg 300
cttcgaggct cggatgagtc tcaaggaagt tcatgcattt tgccgtatat tgcactgtac 360
ttgtagagaa tgatcgcgta tgtagtgtg atcataaatt ctcttcgaat tacattcaaa 420
tatattgag 429

<210> 2902

<211> 350

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-H2

<400> 2902

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atcatggtga tatgtgttta ttcgtccggg gactcagtag aacgataacc tctgtgcaca 120
gtgatgtttc agtttctaca ttgatgggtt caagcataag aaggtttcaa aattaaatga 180
gccttgatac ggactgataa caaattatgc tttctgagtt tcaagctact gaaagtaatt 240
gaagctttgc cttcgctatg taagaatggg tgcattgtgt aattagtggg gcacattttt 300
tgagactgtc caaaattcta ttataaaatg cttatatgaa attgatgggt 350

<210> 2903

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-016-Q1-E1-H4

<400> 2903

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gaactggagt acaagatgga gcgccatgtg attgtccgca aggcttgagc tgaactgaac 120
 cgatggaact accatggaac cctctggcca tctgatgtgt gtgtataact agtgctgaca 180
 ctgcagcctg tttcctgagg aaatttggtg cttcggtgaa attgaattgt agttgtacta 240
 cttaaagctg tagctgtagc cctgaattat cttgtcgaa tgaagatgta ccacagtaag 300
 ttcagtcatg aatcatttgg gcgttctgca gctgagcaga gtatgcctaa gaaactgatg 360
 ttgaagtttg gaaatcccgt agcatgcatg tatggtaaac gttgtgtgac acatttgaag 420
 catggaatgt tctttg 436

<210> 2904
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-H8
 <400> 2904

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 agtactcagc ggaagacagt tgaggctgag tctgttgcag ctgcagggaa gcaacaagct 180
 cgagaagtag tgaagaaatc tttccgtgcc gagttcatcg agaagctgca caaagatttg 240
 gatgacgata tcgatgtgag agccttggaa aatggattta tatctgtcac tctctgaat 300
 gtgcacggcc atgtcgagcc tgaactcgaa gctccagcgt cagactggct gtcagcagct 360
 gtggctgtat ccgaagaaaa agaagctcca gcgacctaac agaaacgcag aaatgtacac 420
 tgtaggtggc ttagtccttg ccctgggtg 449

<210> 2905
 <211> 425
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-016-Q1-E1-H9
 <400> 2905

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cctcgagata cggccaaaaa agagatatga ataaatttca tcaaattcaa ttttaattcta 180
ctcaaatatg aaatccaatt aactaaaga aacttcaaga aattataaaa ctaatgcaaa 240
aaagaatcag taaatttggga tctaaaacat agaagttata agcaaactaa aattagaact 300
attctgaaat ctaaaacaga gaaagaaaaa agcatgcatg cggctgaaag aaaaaccgaa 360
gaggccggtt cgatctaaac cagaaaataa accgtaccga accgatcaaa tctaataaaa 420
cctac 425

<210> 2906
<211> 423
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-017-Q1-E1-A10
<400> 2906

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aagagctcca agaactcggg tctggaactt ttggaactgt atatcatggg aaatggaggg 180
gctctgatgt tgcaataaaa agaatcaatg acagatgttt tgctgggaag ccatctgagc 240
aagaaaaaat gcggaatgac ttctggaatg aagcatctaa ccttgctgat ctgcaccacc 300
ccaatgttgt ggctttttac ggcgttggtc tagatggggc tgggggatcc attgcaacgg 360
ttacagaata tatggttaat ggctcactta ggacggcttt gctgaagaat tccaagagcc 420
tgg 423

<210> 2907
<211> 426
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-017-Q1-E1-A11
<400> 2907

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atatgatggg ttgcgagagt gacagaatct gaaaccctag tttatgcgct attccgtaag 120
ggaccgattg gatccaaaag tataatgcta tgggttagaat ttattcttaa cactttttatc 180

atagttgCGG atgcttgCGa gggggTtaat cataagtacg aggttttttC aagtaagaac 240
aacacctaag cactgatcca cccacatatc aaattatcaa agtagcgaac acaaatcaaa 300
ccaacatgat gaaaatgact agataaaatt cccgtgtacc ctcaagaaca ctttgcatat 360
cataagaggc tgttttggca tgtcctttgc ctcaaaagga ttgggctaac ttgctgcact 420
tttttt 426

<210> 2908
<211> 412
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-017-Q1-E1-A2
<400> 2908

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tgacagtcag ttttagcttt ctctactgag gtgctcggcc cagctcaact ggggcagaat 120
cgcagtagtt ctctagtgc taccttagcc gatatagcag aacgtaaggc accgaaacat 180
aggagccggg aaaaaacaac tattgaccca aatcatgatt cggagccgat gcatatagtg 240
ctataagttc ggagaaccgc acttgtgaaa gtgttcggtc ttctcacacc atgttaaggg 300
gtactgaagc ccctggcgta tttgccgtac cacagcgtaC gggTggaaca tgTtattaat 360
aaacatatat atataaagag ggtaatgcaa aaaaatagac aaaagctatg ca 412

<210> 2909
<211> 381
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-017-Q1-E1-A4
<400> 2909

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ggccaaatta ggtgttaatt agtctaaggc ttttgcaagt ggaccccggc tagttaatat 120
aattaactag aatagtttag ttgatgtcca tgacatgtgg cccaccttg actagttgac 180
cagtcaaagt gctgactgta tatcacctag ccaatgacag atggccccct gcaactgttca 240
ttgttgactc agtcaacatc tgactggacc tttgactttg accctgaccc cactgtcata 300

ctctatgggt ggaatagcgc taggtaacaa aagtttaatc tggctttatt tttcgaattt 360
aagatacatc cagtaatttg g 381

<210> 2910
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-B1

<400> 2910

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gacaagaaga agaagaaggc caagaagagc gtggagacgt acaagatcta catcttcaag 120
gtgctgaagc aggtgcaccc ggacatcggc atctcctcca aggccatgtc catcatgaac 180
tccttcatca acgacatctt cgagaagctc gccggcgagt ccgccaagct ggcccgtac 240
aacaagaagc ccaccatcac gtccaggag atccagacct ccgtccgctt cgtcctcccc 300
ggcgagctcg ccaagcacgc cggctctcca gggcaccaag gccgtcacca agttcacctc 360
ctcctagata atctgttccc gtatcctcct g 391

<210> 2911
<211> 264
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-B2

<400> 2911

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gtgcctagac ttataaaaga tttcattgat gaggtttcaa ctcaattgaa aatgggtgtg 120
gaatctgata cggatgagtt gcttttggaa gagaagcttg cctttgttca ggaaagcaga 180
catgcctttg gaacgactgc gctactctta agtggggggg gcttcactgg gttcattcca 240
tgtgggtgta ctgaaaacct tggt 264

<210> 2912
<211> 279
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-B4

<400> 2912

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 gtgcagtgat gtacgcacct gagtgcgaacc taacataaga acgatttgag acatgtgtcg 180
 acacagcttg actacagcga ttaggcacct accagcgatc ctgagtatcc aacgcttcga 240
 ggtgtatgag atacacatac atacgcatca agacagccg 279

<210> 2913

<211> 68

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-B5

<400> 2913

cccgaggaccg acggaaaacg cgaaacgacg acgcaccagg gacatggcgg acggaggagg 60
 gcgggggct 68

<210> 2914

<211> 319

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-B9

<400> 2914

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 cttctttgca tgcaacaggg atgaagaact ggctgccaac tatcttttgg atcatggcca 120
 tgagtttgag gaacaacgat agatgttaga ttggtcttgc tgttgaaaga cagaagagtc 180
 agtgacggaa gcagtacagt ttggtgtcgt tcttatatct tgctgctgaa tatcactact 240
 acttgccatt agtgcgatgt tgctgacttt caatttcttg tatcctggaa atgctttcta 300
 agtacataat atcatatgc 319

<210> 2915

<211> 412

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-017-Q1-E1-C2
 <400> 2915
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 ccttgacgtg taatactcat ggggcaaaat aattctgttt tgctagaact tattataatt 180
 tgggtctcatt cacattcaaa ggctataaaa ggtgaatgag atcaaattat atctcatcta 240
 gatgagttct atatactccc aaataattac caaatgcaac ccatattata ttcacaagaa 300
 atcgaaattg tgcagaccat tcataacagt acatcttcag acattggaaa actgcactcc 360
 gcacttggtt ggcgtgaacc catctcagct cgcactccaa aactcgaaaa at 412

<210> 2916
 <211> 404
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-017-Q1-E1-C4
 <400> 2916
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 acgacgacca ggatttctcg gacttcatgc aggagatgct ggtgatgatg gatagcgtga 180
 aaaacgagaa gccggacacg ctccaagacc tgcagaagat gctggatgac atagtcaacg 240
 gcgacggcgg tagccgcgcc actgctggtg ctggtggtag cggcggcggt ggtggtggct 300
 gcggtggtcg cgttccaccg gaggccaacc gcagaactcg tgtcgcccct taccgcgacg 360
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<210> 2917
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-017-Q1-E1-C9
 <400> 2917

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 tagacttggc tgttactgtc ttgacaactg gattctggcc aacctacaaa acttttgaca 180
 taaaccttcc ctctgagatg gtgaaatgtg taaagggttt taaggagttc tacgcaacaa 240
 gaacaaagca caggaagctt acctggatat actccttggg gacctgcaat atcagtgcaa 300
 aatttgatgc taaaactata gagctcattg ttacaacata tcaggccgca ctgctgttgt 360
 tattcaatgg atctactaag cttagttact ctgagattgt aacacagctg aacctgtcag 420
 gtgatgatgt 430

<210> 2918
 <211> 188
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-017-Q1-E1-D11
 <400> 2918

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 gggttgctag aatgacacaa gcttaaacc tactttatgc gttgattcgt aatgggctga 120
 tttggatcca catgtttcat gctatcgta ggtttagctt aattcttcct tcgtacttgc 180
 *tgatgctt 188

<210> 2919
 <211> 405
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-017-Q1-E1-D12
 <400> 2919

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 acatcgcat ctctccaag gccatgtcca tcatgaactc cttcatcaac gacatcttcg 180
 agaagctcgc cggcgaggcc gccaaagctg gcgggtacaa caagaagccc accatcacgt 240

cccgaggagat ccagacctcc gtccgcctcg tcctccccgg cgagctcgcc aagcacgccg 300
tctccgaggg caccaaggcc gtcaccaagt tcacctctc gtagagtgt cctgtcctg 360
tgtctcgtag ttagctgtcc ggggtgtgtt gtggccgtgt aatcc 405

<210> 2920
<211> 296
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-017-Q1-E1-D2
<400> 2920

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cggactctca cccttcacgc attgccagcc tctctaatag cgcgcacctt tcgccggtat 120
catacaccca ccagagacga tcctcaaaac agccaccata ccgaactatg atggcatttc 180
caaagccatt ccgatatata ttgccatgca actttccacc attccgttta ctatgacacg 240
ctccatcagt gtcatagggc tttgcctgat catgtagttt acagttgagt tgtggg 296

<210> 2921
<211> 427
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-017-Q1-E1-E10
<400> 2921

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tgaaggtgaa aggatactcc tttttcagga agaagaagaa ggtgatcatg ggctttgcgg 120
atggtttccg gggcgaaaga gtgaggaccc cgtctectat catgtacgtc cacgacgtga 180
cccagctcgc gcataatgga tgccgactgc ccaaaaaggt aaggaagtaa gactgataat 240
agccccacgc aagaagtgtg gagatcagta tcctgtccca aggagaaaca aattaagaac 300
gatatgtatg tatcgacagg ttttgtaata atgtcatgag cctggaagta tttatgaata 360
cttattagac agtcttagat tggcgcttgt aagacaaaca tttttgtcat ttctgtgaag 420
ttactga 427

<210> 2922

<211> 140
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-E3

<400> 2922

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ttgttgaggt tttcatggat gacttttctg tttatgggaa gtcttttgat gattgtctaa 120
gcagtcttga tcgagttctg 140

<210> 2923
<211> 299
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-F10

<400> 2923

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accgttgacg cccgacaaca gtcaccttc acctgcggac atccggaggc cggaacgcgc 120
tccttttacg acggcgggtcc ttaccgcgcg ctgttctggg cgctgcccga gcttgacgac 180
caaggcccaa aagacgtctt gccgttaaca tggcgcggt tggagatgtg gggcatgctg 240
acagcggcgg cgctggatgg gacttgggcc gttagacccc cgattatact cgatcatgc 299

<210> 2924
<211> 166
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-F5

<400> 2924

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aaggtccaca gtcagagagt tatcacgaga aagcttacga ccagagagtt agttctgaat 120
cagtgtagac acacgggaac agtagtagta taggggtggtc gagagg 166

<210> 2925
<211> 52
<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G11

<400> 2925

cgggtaatgc agatgtaaca cggactacac tggatgaacgg gacctggcaa ac 52

<210> 2926

<211> 342

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G12

<400> 2926

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tacagtacat acgacagtac tatgccctag cttgcgagag tagagtagta gagtatgact 120

ctgctctact acgatcatcg gaggagtagt agattctaata ctataatagt taaaaacttc 180

gaggcccgat cgtggaacca ctacaagcca tgcgcaaaga ccgtgtctat gtgggtgtttg 240

gacttacatg gattatttat ttgagaagc gcttgcatca ctcaacacat cagcatcacg 300

aactcggttt tttctctacg cctagtccta ctgacactc ag 342

<210> 2927

<211> 396

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G2

<400> 2927

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cactcttacc cttccgcaat ttgctagcct ctatgggtacc gtgcattgcc ctttctcacc 120

ttgagagttg gtgcaaaactt cgccggtgga tccaaacccc gtgatatgat atgctctatc 180

acacataaac ctccttatat cttcctcaaa acagccacca tacctaccta ttatggcatt 240

cccatagtca ttccgagata tattgccatg caactttcca ccgttccgtt tatcattatg 300

acacgcatca ttagtggtcac attgccttgc atgatcatgt agttgacatc atatttgtgg 360

caaagccacc atgcttaagt ttttatacat gtcact 396

<210> 2928
 <211> 353
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-G3

<400> 2928

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 tatctcacca ttagagttgg tgcatacttc gccggtggat ccaaactccg tgatcagatg 180
 agctcaatgt ctgatatacc accataaagc atcccccgaa tagcttccat agcttgctac 240
 tgtggtattc ccaacgacat tcagacagat agcaccctgc atcattctag cgtgcggatt 300
 accattctag cgtgcatcat tactgtctca gggccttgca taatcatgtc gtt 353

<210> 2929
 <211> 375
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-H1

<400> 2929

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 aggcacccca aggtaaaatt caaggacaac caaaatctta agcttgggga tgccccggaa 120
 ggcatcccct ctttcgtctt cgtctatcgg taactttact tggggctata tttttattca 180
 ccacatgata tgtgttttgc ttggagcgtc gtgtatgatt tgagtctttg ctttttagtt 240
 taccacaatc atccttgctg tacacacctt ttgagagaga cacacatgat tcggaattta 300
 ttagagtact ctatgtgctt cacttatatc ttttgagcta tatagttttt gctctagtgc 360
 ttcacttata tcctt 375

<210> 2930
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-H2

<400> 2930

attccaaggt cgacgggggtc gtcttcagat taccaaacia acaccatacc aaagagtaat 60

tcttcggcat tatccctta tacagtaact attatatact accgggatga accgctgata 120

cgtctccaat gtatttataa tttttgattg ttccatgtta ttatattacc ccttttggat 180

gttcatgggc tttatttaca catttatatc atttttgggt caaacctact aaccggagggc 240

ccagcccata ttgctgtttt ttgcctatt tcagtatttc gaagaaaagg aatatcaaatt 300

ggagtccaaa cggaatgaaa ccttcgggag catgaatttt ggaacgaacc tgatccggag 360

agcttggagt gcaagtcaag aagcttccga gggccccacg agataccccc ccctg 415

<210> 2931

<211> 325

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-H3

<400> 2931

ttccgagtc acgggcacag gacattcctg caggetatgt cctccgagcc tcgtgaaatc 60

atgaggacag aagcttccgt gctacttca actctgcagg accaatgaag cttgaagttt 120

acaagttggg ggatgccagt gatactgac ttgcacgctg cttgctgctg tctacttgat 180

gtttttaaat ttaagtcaaa ttaagcgta tgtgtcgta aactttagtt atgtccagtc 240

ttgcgatttt ggctcgctg cctgtgtgct aaactactgt tggatcctgg atgctatgtt 300

ttgagtcaag atatgattat gtaca 325

<210> 2932

<211> 323

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-017-Q1-E1-H8

<400> 2932

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ataataaaga tgggtctctg agtatggatg agattagtca ggcagtaaat atgaggatac 120

caggggaacg ctctgctggc cgtacaacca tgaaaagact tgaggagatg gattgggaca 180

cgagtgggat ggctagccac atcgactttc tgtctgcata caatcgccgt ctctggatag 240
 gcgataacca ggatgacgat gactgatcga tgtgcaagcg acacctcaca aatatggtcg 300
 accagaacct tgatgcatag tgg 323

<210> 2933
 <211> 383
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-A3
 <400> 2933

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 cttcaggaac accagctcgt cgcgatggcc gacgccgcga gtgtgcttgt gagagccctc 120
 gcgtgcccgt gagagctcgt tcgagggtc caccggcgcg tgggacatct ctgctgcac 180
 tgcggcttcg cggtcgacc tctctagtcc ttccgcggcc ttggtctttg ctgcctgggt 240
 atatgtccac cctaaactcc tgctgccggt catggcggaa cgacttgaca tgaaagacca 300
 gttttatggg tgatgatgag ggtaattgtg aagtaatttt cgcgtgggta gtttttatag 360
 cccagtgcata agtgtgaaca cat 383

<210> 2934
 <211> 378
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-A5
 <400> 2934

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 aaaggtggcc acagtggcta cagttcagga tacagcgggc cgtcgtgagg gaattctttt 120
 ttaccccccc ttttttgact ttctcgtcga tgcaatttgt aaagtccggt tgaatttata 180
 tgctgacttg acttgtgtgc gaggaaggga tgtttgacct aagtatagct tctggtagct 240
 gcagccgttg attctttcat atgttggtga ccgatctgcc caccgccgtt tgctatgtaa 300
 ttcaaagagc taattgagtg ctgtactgtt catacccact cagggttgag taagagtaac 360
 ccaacgattc tttttacc 378

<210> 2935
 <211> 392
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-A7

 <400> 2935

gtcaatacta caccctataa tgggtcttaa taatgacgcc acggcgggtt acaagaacaa 60
 ggtgaaaatg taaaggaatt tttctaagta ttgaagattg acatgaacaa attcaaacca 120
 atctagggcc taatgttggg gatattacta ttggacgtaa accggccagg agtagccggg 180
 ttaactttat gaagattgga agcccatgaa gacttgaaga tgatgacgct ttacgaagtc 240
 ccaaggccca gaagtgaagt aaggcctata gatgtaaacc gacttaatca tgtaacttgc 300
 tgtgtaagat aggaagtgtg gagatcgaac cggacacgtt tataatccgg cttcaggact 360
 ctgtaaaccg gcgggcgtca acctatgtat at 392

<210> 2936
 <211> 392
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-A9

 <400> 2936

cgggcagtgc acgacgtggc cgccgtggac gcggcggcgt accagagctg cgtgggtgcc 60
 aagggcaaga gggcgatgcg cagcgggcac gacaaggatga ggctgggtcaa ggggatgcac 120
 tacttctgtc gcaccgtgcy cgggcactgc aaggccaaca tgaagatcgc cgtcagggtc 180
 atctagagtg tttatagcta cctgttttgc caactgcatt cagatcaggc cgatccaaag 240
 cttccgacta cagcttttta gtttgcttaa tgcttgaacc aactgctagt ttgcttccca 300
 gtttttatcc gtgcactctt gttctagggt cggcaatcgc gagttgtaat tctgtttaat 360
 ttgaatatgg gtctgaaggc ttactaagaa aa 392

<210> 2937
 <211> 357
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-B1

<400> 2937

gtcgacggga cagttgatgg tgtttcatca caacaattgt gtgggatgtc ataggcattt 60
ggatgctgga cgaacattgc tgcaagaact tgtacaaact attggatgga acaagccccg 120
gttttgtgct tacactggac agttattttg tgccctcttg cacacaaacg atactgcggt 180
tctgccagca agagttttac accactggga tttttcttta tatccagttt cccagctagc 240
aaaagcattt ttggactcca tctatgacca gcctatgctc tgtgtaagtg ctgtcaaccc 300
tttccttttt gctaaagtgc ctgctctgct taacatcatg agtatccgga agaaaat 357

<210> 2938

<211> 350

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-B4

<400> 2938

gggtcgacgg ggagtacgat gctcaggcca atgagctggt gcaacttaag cgtgaggccc 60
ggatgaaggg tgggttctat gtcagtcctg aggcaaagct gctgtttgtc gtccgtatcc 120
gtggtatcaa tgctatgcac ccaaagacca agaagatctt gcagcttttg cgtttgaggc 180
agatttttaa tgggtgtgtc ctttaaggta acaaggccac cattaacatg ctgcgtcggg 240
ttgagccata tgttgcttac gggtagccta acctcaagag tgtcagggag ctgatctaca 300
agagagggtta cggaagctc aacaagcaaa ggattccttc tgacaacaac 350

<210> 2939

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-C2

<400> 2939

gggtcgacga gtcacactaa tcaggatgat aggggatgtg tgaacattta cctcatcacc 60
ctcttttctc cgtccagttg cctgattacg ctgtgggtgga tccatgaaat catcatcatc 120
attttgatga tcgccacgag ccattctgct gagataggaa cagaccaaata tgtcatgggtg 180

gaaatgtaaa tgcaagaggt aagcagttgc cacctaacag aaaatgtcaa ctagtgaatg 240
cagaaaaaat aacatgaaca cacacgcacc cctcctatga ttgtcggaaa cataaacgcg 300
gcaagtaagc acgttgttgc attatcaagt aaaaaaagtg tacatatggt aaatgcactt 360
ttgaaacaaa aatgttgaag ttgccattgt taccccaaga t 401

<210> 2940
<211> 287
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-018-Q1-E1-C3
<400> 2940

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gacggtacgc tccaacagtc angacttgggt caataataaa aggaccttcc catttggggt 120
tgagtttgtc cttttttcttg tccggcaggc atagaactag ctcgccaaac ttgtaagttt 180
tggcccgtac ttctgtgctt tgatatcttc gagcctgcta ttgatagaat gcggaacggg 240
cttttgccac gtcacgctcc tcctccaang cgtccaaact gtctctgc 287

<210> 2941
<211> 370
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-018-Q1-E1-C7
<400> 2941

ctatattgat gtcgtattat cttgcaccag aaggttcagt agcaaaaata accggcaagg 60
agggactgtt tttctcaggt cctgcactag tttttgacgg tgaagaatca atgattacat 120
ctatatcaga aaaccagca aatttcaagg gaaaggttgt actgatccga ggagaaggac 180
caaaaggagg tcccgggatg cctgaaatgt tgactccaac aagtgaata atgggggctg 240
gtcttgggaa ggagtgtgcc ctgctgacag atggtacatt ttctgggggg tcgcatggat 300
ttgttgtggg ccacatatgt cctgaagcac aggaaggagg gccaatgggt cttgttgaaa 360
atggcgatac 370

<210> 2942
 <211> 424
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-D11

 <400> 2942

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 gctccgctgg aggcaaggct gaggccgagg cgtgctgtgt gatgacgtgg ctgggccatg 120
 cgggcagggt agacgttggc ctctcttctt tctttactac tcctactact atcagtgcgt 180
 gtagtgtagt ggtaatgtag tgtcccgctt tggaaatgta cctgctacta aaataggtcc 240
 ggtcctggta cgtgtactgc tgtcctttac tgttattagc aggttacatg ttttaattacg 300
 tagttatgaa ctactatcag gaagtgagtg tgacagtttt cttgtgcttc cggtttgctg 360
 cctagagatg tactacaagt tcctatgtaa aaatatattat tttaatgcaa gtatcagttg 420
 tgtt 424

<210> 2943
 <211> 307
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-D2

 <400> 2943

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 gtagtgccgg gttgatttta aactgcggca ccggcaacat taaaagtggg agcaattggg 120
 acgaacgtgg gcggcggagc ctggtcaaag ggctcgctc ctggtgagcc tgcgtagcgg 180
 tctgctcgca ggcctcccta tcagccggtg cagcggctctg ctgcacgcc tcccattgac 240
 tcacgccctt gctcggacgg cacctgccga tgagaagcgg gactcgtagc ggcacgttaa 300
 cgaccac 307

<210> 2944
 <211> 371
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-018-Q1-E1-D3

<400> 2944

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catcaggtgt gtcttcttga ttttctctca ccaactgcag ctggcgctca agcttggtta 120
ttagaggcga cagaacacgc ttcgcgtgtc tagtttctgt aaatctgttt agccatcact 180
tttgtcttca ctagtgtatt tggcctcagt ttagtgtata atttggttta gccgtcactc 240
tgttttctact agcgaacgcc aagtcttgga ttggttgcat ccaaactctc cacgtcctac 300
aaacgctcat gaacttctact tgtcaatgta taatatagac tgggtgtaaac aaacttttca 360
tttacgctta g 371

<210> 2945

<211> 319

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-D7

<400> 2945

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ggatcctcaa tctagcgccg ttctgtatct cttcttgagg ctcaactgaa cttgtaaata 120
agatctctgt agctagccta attctttttc ttttttgccg aaaatcacct ggttaattgt 180
tacctgccct tcgatccagg aagttcatgt gaaaataaaa agttccagga agttcagatt 240
tatatgtagc ttctctatct tccaagatgt aaccaggata ttaagttcca ggaagtttac 300
ttaatatcct ggaagacaa 319

<210> 2946

<211> 421

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-D8

<400> 2946

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ccctcgtccc gctcgcgttt cccggtgtca gttgttcgca ttcattgtctt tgtagagcgt 120
ccgatccgcy ttgacgctgg cgcagaacga ggcgacctct cactaccggc tgcacgccc 180

actaaacacg cctccttgtc gcattcatcc agcttcagat tgccccgcgt atctccattg 240
aaccgcgcgc tgggctaaga aacctactcc tgacacacgt ccgcccgtga gccgtccaac 300
attaaacaaa atgcgcggttg gtcctcgcga tccctagcta tttaaagtga gtcagacacc 360
gggcaagacc tgcaccacat ctccgctcct catctcctat ttgcaccata ttttgcacaa 420
t 421

<210> 2947
<211> 390
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-018-Q1-E1-E1
<400> 2947

agaacttgaa gtgtacatgc agaaccacaa aaaagttatg gttgattcct tgtggaagct 60
taatgttgct gacatagaag ccaccatata acatgtctgc cagatggtgc ttcaggaccc 120
cttggccagg aaggaagacc tgcgtcttcg tgccaaagga ctgaaaactt tagggaaaat 180
tttccagggt gttaagctca acagtggcga aggggaaggg tctcacatga agaatataga 240
taacatggat gacaatgccg gtagctcccc tgattccgct acaaaacggg agtcatcaat 300
caatccatt cctaaccctc ctcttaccga gagtccatat gtggaggctc cccattttgg 360
cggaacctat tgttcgttaa cctcccaatg 390

<210> 2948
<211> 378
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-018-Q1-E1-E2
<400> 2948

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cggggaactt ctgtccgcga tcaaggatgc ggaggaaggg cttctgcatt tgaagcggtc 120
taggctagtg aagcaaatac atgagatctt tccaaatcag gagtcagcat cgctatcaac 180
tgaagctgct attgagccat tagatccaga tgatgttgag ccagaaccat tggagccaca 240
ggaattttca gtcggatcaa agtgtagatt caggcacaat gatgggcgtt ggtataatgg 300

atgcattctg ggacttgaag attcaggcaa tgcacgggtc ccatttctga aacgcacatc 360
 agaaaaaaat gttcatgt 378

<210> 2949
 <211> 142
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-E3

<400> 2949

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 ttaaagtccg gcactctgca caatgacctg ttcctttgag ttttgtttgt cttgctggag 120
 ttatagattg tgttatctcg at 142

<210> 2950
 <211> 413
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-E6

<400> 2950

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 tcatgttgcc ggtgaaaggg ttgagtacgc gtgcagcgtg aggatgctcc ctgtccgcga 120
 ggacgaacaa ggcgccgtcg gtggtgacgg cgacaacata gtacttgagg agcacaggca 180
 tgtccttgtg gaggacgcgg ccgctggcgg tgttcacat gaggcattgag ttgggctcga 240
 aggccttgtc gatgatgatc cagttgagc gacagaagcg ggggtcggag gagttggagg 300
 ggtcgtcggt ggcgagagcg cagctgcggc agacggcgcg gaagtccatg tagcagtcaa 360
 ggtcgttggt gtcgaggagg cactcggcga tgcaacggac gagatccgat ggg 413

<210> 2951
 <211> 423
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-E8

<400> 2951

tcgcgggtcg atgggggact ctaaaatgag gcgtggtaag agcctaagct tggggatgcc 60
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ggcatcgctt ctttcgtcta cttctatcgg taacttttagt tggagctata tttttattta 180
ccacatgata tgtgttttgc ttggagcgtc ttgtattatt tgagtcttta tttgttagtt 240
ttccacaatc atccttgctg cacacacctt tttgagagag aactgatga tttggaaatt 300
gttagaatac tctatgtgct tcacttatat cttttgagtt atatagtttt tgctctagtg 360
cttcacttat atcttttagg gcaagatggt ggatttgttt tatagaaact tttgttctct 420
cat 423

<210> 2952
<211> 414
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-018-Q1-E1-F10
<400> 2952

gtcgacgggg aacacgatag tgactcctct gagggcgaag aggaaatctc ggaacgagag 60
gaatatgaca aaccaaggc cagtgcaccc aagaagaaac aaataggcga gggtagggag 120
aatggcgagg atgatgagga agaacaagag gagcaggagg gtggaggagg cgacgatgat 180
gacgacgacg acgacgatga caatgaggag gacgacgatg atgacgatga tgtcgtctgt 240
gaagacgatg aagatggagt agaagaggag gatgacgacc aggacaacga cgatgatgag 300
gaggaggacg acgaggactc gctccagccc cccaagaaga ggaagaagtg aagcccttcg 360
atgccggctg ctttagtcac catgcgatga gatgtgcctg ttcttactg tggt 414

<210> 2953
<211> 337
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-018-Q1-E1-F2
<400> 2953

cctaaagtga ctcgtactac aacaagaagc ccaccatcac gtcccgggag atccagacct 60
ccgtccgcct cgtcctcgcc ggggagcccg ccaagcacgc cgtctccgag ggcaccaagg 120

ccgtcaccaa gttcacctcc tcttagactg acgacgcgcc gcttggtgtg acagatgtgg 180
 ccgtctgctg tatctgtagt cgctgttgac tctgcttacc tccatctgca actagtggta 240
 gctgtagtgc gcgtgctggg tgatgattgc caacgccttg ttggctgggt ggatgtaaga 300
 actgaacgtg ttgccttttc aaactgaata aatccat 337

<210> 2954
 <211> 361
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-F8
 <400> 2954

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 caaacagtag ataaagtagc atggagcaat caaaaattat agatacgttg gagacgtatc 120
 agatgccac gcagggagga gtacgaggtg tgactgggtt ggctgcggtg tgaggctgcc 180
 atcgccgcag aataataggg ggtggggttg tagactgatg gcctggccag cgggtgggagt 240
 agtaggggca gtgaggcctc cgcggcagca caaccagcca cgggaggcag gagcatgcgg 300
 tggtttgac agctagagga agaaaatcag aggtataaga agcaggacga ccgttggtatg 360
 t 361

<210> 2955
 <211> 432
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-018-Q1-E1-G11
 <400> 2955

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 agctaccagc cgagtagcgc ggtgacggag ctgaacgaga aggacttctg gcgcatgttc 120
 gagcgctcgc actacgagca ctgccggcag aaatacggcg ccgtgggcac cttcatgagc 180
 gtctactaca agggcaagaa ggggcgcaag tccgagaagg aggtgcagga ggccgaggcc 240
 gccatcctcg agcctgccta cgccgacgag gcctaggcgt gttcgtcgtc catcgccgtc 300
 gtgctcgtcg tcggccgcct gtgtctcgcc ggtttcggtt tcggtttctt cggctcgtcg 360

aactctggat taattggttc ccttttgctt ggttgcttat taataagtag aacttgatcg 420
atcgtgtagc gt 432

<210> 2956
<211> 357
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-G2

<400> 2956

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agcgacggga agacgagggg catgaagaag ggcagcacgg ccaacaaggg cgtggagacg 120
tacaagatct acatcttcaa ggtgctcaag cacgtgcacc cggacatcag catctcctcc 180
aaggccatgt ccatcatgaa ctcttcatc aacgacatct tcgagaagct cgccggggag 240
tccgccaagc tcgcccgtca caacaagaag cccaccatca catcccggga gatccagacc 300
tccgatcgcc tcgtctctcc cggcgagctc tccaagcacg ccgtctctga aggcacc 357

<210> 2957
<211> 342
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-G4

<400> 2957

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gtcattttgt tttgctttgc tttgcttgct gtatgaataa aataccaaga tctgaacttc 120
ttaaatgtta tagagtcttc acatagttgc ataattattc aactactcat tgatcttcac 180
ttatatcttt tgcagtagtt tgtcatttgc tctagcgttt cacttatatc ttttagagca 240
cgggtggtggg tatattttga agaaataaat gaactctcat ttttcactta gaataatttg 300
agagtctttt agaacaacat ggtatttgct atggttataa aa 342

<210> 2958
<211> 301
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-G5

<400> 2958

ctcgcgtttc gatacgagtc actagagtga ctcgaactac tctcttgtag atggatggat 60
ggaagcgttg gaccagcctg ttgtcttctt gcccgcggtg tgtctctgtg ttgtatcata 120
actcgaatca attcgttggt tgtacctgag aggccattcc tttcattgcc taggaatgat 180
tttaagttgg tgcattttgg atgctgtcct gtgttgaaat caggggaataa tgtgtatctc 240
gccctgctgc cttttcctgt atgtactcta atgaaagttt ggcatatgc accctccttg 300
g 301

<210> 2959

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-G8

<400> 2959

ccgggtcgac ggggtaccac aatggacacc agtctatcgg gtccagagag atatccctat 60
gccacttggt acttccggtg tcgagaaagg taacctgcgt gagcttgctt tggctcgaat 120
ggaagacttg ggcttgaaat gcagagatgt cagaacacgt gaggctggaa ttcaggatat 180
ccatcacaag atcaggcctg atgaagtaga gcttgtcagg cgtgattatg ccgcaaata 240
cgactgggag acctttctct cgtatgagga tacacgacag gatatactta ttggcctggt 300
gcgcttgctg aaatgtggcc gcaatgttac aggctctgaa ctcgtaagga ggtgttcaat 360
tgtccgtgaa cttcatgtct atggaacagc agttcctgtg c 401

<210> 2960

<211> 422

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-G9

<400> 2960

gggtcgacgg gggagacgat catgcatccg ttgaatgctg tcggattcct cggtgaggag 60
aagatcgccg ccaaagtggc ctacttgaag aagacgttca ggtggtcaga cgctgaggtg 120

agcattgctc tgcgtaaggc tccgtctgtg ctgaggaagt caaaggaatt actgcagcgc 180
 aggtctgatt tctcatctc tgaggtgggg ttggaaccgt cctacattgc tgaacgggtca 240
 gtaattatca attacaagct ggagggccgg atgaaacccc ggtactacgt tgtaaagttc 300
 ctcatggaaa atggattgct caagtgcaac ccaggctact accagaccgc tttcaagggtg 360
 agagagaacg tattcatgga gaagttcatt tgccctcaca atgaagttgc gccgcacctc 420
 tc 422

<210> 2961
 <211> 373
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-018-Q1-E1-H1
 <400> 2961

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 cccacaggta gccttcacga cgagcgact gctgatgacg tgaatgctgg aggccagtcc 120
 gtgtatcaag gacttganat ggcgctgatt gaggttggtg ctgcgactgg gcagttgacc 180
 acaggttgat catcaatacc gtactggtaa cttgtggctc tgtctgtctt taatatgggtt 240
 atccaacatc aacatggagt ttatcttggtg tgccctgatc tggcaatgat ccgtttcgtc 300
 cgtcaaatga ggtagcaaga atattagctt catttgatt ttactagttt aattatgact 360
 atgtggttgt gat 373

<210> 2962
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-018-Q1-E1-H12
 <400> 2962

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 aagatctcca ggtgcaaaca caacatgttt tctaccctta tctcgagcaa gtttatattt 120
 agcattcata cgctcaatgt tttccttagt taactcatgc attttttaaaa tcaattcagc 180

acgttcttta gcatcaaaaa taaccttctc cgaagatgga agaggcaaca aatcaatagg 240
 tgcacgaagt aggaaaccat acacaatttc aaaagggcac atcttagtaa tagaatgcaa 300
 tgaacgatta taagcaaadc caatatgagg cgagcattct tcccacattt tcttattatt 360
 cttcagaaca gccctaagca tagtagacaa tgttcaattg actacttcag tttgtcc 417

<210> 2963
 <211> 404
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-H2

<400> 2963

ggtcgatggg acagctcaag tcttgataga gatagagata ggggttagtcc agcggcgccg 60
 ccctcgcgcg tggggagctt cgaatcgaaa tttaggaatt gagagcggga gcgggacggg 120
 tgagatccag atttccctcc tccttcttcc tccttttcc cccttctctt tatctttata 180
 gattattaca gaagagagag agagagagag agagagagag agagagagag agagagagag 240
 gtggagatcc tgattcctcg cttctcctcc cggcgggatc cgaagtaaga tcgatctcca 300
 aagttggggc aaataaatag ctaccgtact agtccaaagc tagcggttga ggaggcagaa 360
 cacaaagggt tggtgatttc tcgactcagg tcccaggcta aatc 404

<210> 2964
 <211> 323
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-018-Q1-E1-H4

<400> 2964

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 tttatgggtca tggacceaat gtgaatgggt tattcttggt gaatctcgac agtagtgata 120
 cacatgttca taagactaat ggcaaaagat gcaaagtga taatgatagt accacatact 180
 tgtggtacta ccccttaggt catattgggc aaagtgatga aaaaactcaa acggaggggt 240
 tttggaatca cttgacttgg aatcattttg gaacatggtg agccatacct catgggcaaa 300
 ataccaccag actgttttct cgc 323

<210> 2965
 <211> 81
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-A11

<400> 2965

agcaacaaaa ctaactaata agggaattcc aaaagcaatc cgagaaaaaa tttcaaggaa 60

ctttccaacg gtccggttaa t 81

<210> 2966
 <211> 415
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-A12

<400> 2966

gacggggatc tggaacgggtg gatgtattga gctcgagctg aagatcagcc actccatcca 60

cgaccaatgc ttcttttccct tattttcatg gagatgattt cagtactctt tatecgtgtc 120

atgttagagc caagatgcat gtgccactcg ttccatcaag tgtctaataga actttcagtt 180

ttgttctctg tttatcttgg cttcttgctg cttaatatgc ctatgattca ataacaatac 240

ctactataaa aaaagaaaat ggaaggggtg cttcctacct ggcaccgccc aacttgctct 300

ctttgttcaa tattgtgtcg agtccccaag ggaacatggt gctgtataaa caatagtgga 360

aagcacaggg ctcttgagaa ttaggatttg ttgggttcag tcgtttcaag tttta 415

<210> 2967
 <211> 390
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-A5

<400> 2967

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ctgtgcttac ctacagaga gtgttgaggc agtgatcgag gtctatgcag aggttagcca 120

cccttgccat gtgagattcg tcgctttcag cagtggctat gacgatgaga ttgtgctctt 180

cgacggaaaa ttctctgggg aaaagctttt caagcatggt gttgctgtga aggcagagag 240
agaactgaag gttcagttag aggtggagaa atcagttttc cagtggattt ttcaggggtgg 300
aatgccgga cctcttagct tccccgatga ctcgatgttg aagtatggcc agtttgatgt 360
gggtgtgtgt ttttatccat cgacgggcta 390

<210> 2968
<211> 423
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-019-Q1-E1-B11
<400> 2968

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aacaatggtt gaattggcaa attcccgtag ggttaactca aagttttaat aagatccata 120
aataggtctc ggaagaaaat gctcttgctt gtcataaata atttactcca gaactattct 180
ggtgtagttg ttctgcgaag aagacagtat gtttgtggga agagcatgct cttgcttgctc 240
ataaataatt tactccagaa ctattctggt gtggttggtc tgccaagaag acagtatggt 300
tgtgggaaga gaatgctctt gcttgtcata aataatttac tccagaaata gtctggcggtt 360
tctgcatatc ctggcctgtg aagaagacat agtaatgatt gtactataat ttagcttcaa 420
aaa 423

<210> 2969
<211> 435
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-019-Q1-E1-B12
<400> 2969

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tcgacggcaa cgacatcgag ctcgctctccc gctccgccgc cctcatcaac cagaaatgcc 120
acgtcaagaa caaggatatc aggaagttct tggacgggtat ctacgtcagc gacaagggcg 180
ccatcaagga ggagtagagt gcgaaaaccg tcccagaagc cgtgtttctg cctgccgtgt 240
ttcatcgctc ttgtgtcgtg gttgtgattt tgaactttct ctagactgaa tttttagtg 300

gagttaatta gggatgcgct atgcaacatg ttatctttat taccctacat attgtcaccg 360
 tgagaattgg tacgatgctt atcttcgcct aaagggtgat gacttcaggt atttgaagtt 420
 aaaacaggac atgaa 435

<210> 2970
 <211> 161
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-B3
 <400> 2970

tctcttcaat tcagggtgtg atagtttgct ttagttatat gtttataatc aggggtgatg 60
 ttgtgatata tagtttcgag ttttggttga agatttactt agagcatttt tagagtcgag 120
 gatgacagga tggtaatatt caaaaagttg tggctctaga g 161

<210> 2971
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-B9
 <400> 2971

tcggagaccc tagtattctt cactgaaaga acctgcacat taaagatgat ccttaaataca 60
 gttctgctaa ctgtttcaag tctcaggggc tactgatata tataaatcgc cagatttact 120
 caccataca tcctttacat actgatccgt ggctctggct agaccatctt gagcagcacg 180
 gaggtacgcc tctccagaat taaaggcgct gaacgcctct ggtgagaaac aagcggttgcg 240
 gagtacggcc cggcggcgcc tatgattcat gacgctttcc acttctgagt ttgtatcgga 300
 caatctttta gagcactcta tgtgcttcgc ttatatcttt tgagttatat aattttgctc 360
 tagtacttca cttatatctt ttagagcatg gtgggtggatt tg 402

<210> 2972
 <211> 333
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-C11

<400> 2972

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cggaaccgtc gtgtaaagcg ccgccgggcc ggcgcaacgg ggttccgcaa caacctctgc 120
gctgcgctga tcgttgctcg cggcttctcg gggccgggac tggaggattg acccggggac 180
gggggccgtt tgaagctttg aatggctgag actgaaagtg gaggcgcgcg caggcagcat 240
cagtagtaag tagtaagtag taagtagcag tggaacaaag taatagtcgt tcgttttgcc 300
cctgtaataa ataagaagag gctgtgtgtt gag 333

<210> 2973

<211> 357

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-C7

<400> 2973

tcgcgggtat ttcaaacagg tatgacgacg gtttagcagag accacctggg tattgccttg 60
tacgtctgag cccctagctt tcttggcgta tccgtcccg c tatggatccg atgagaaggt 120
ttatcagaaa cggcctcgag aagacaaaaa acttgaaaga aagagaaacg tgaaggatatg 180
tggtaccaag agcggttgag ccgcattgtg gaccatggtc tagccgtgcc tccgtccatg 240
cccatgggat tttaagtgc a tattgtgtac ggcgacacga atttcatcgc tttgttgggg 300
ctaggacgta ggccggattg ctagctgagc tccggacgag tcagacggtc ctgttgc 357

<210> 2974

<211> 433

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-019-Q1-E1-D10

<400> 2974

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ggaatataca atgcaagcaa tttcgggttc ggctgcaaca tttgcaaccg gtggttcaac 120
ggcaaatacg tgccggataac cccggccaaa gcggatcaca taaagcacta caagtgcctt 180

gaatgcagca gctccaagaa aatgaggcag tangccgtcg cctgcaagtc tgcttcagcc 240
 gtctctgacc catctgatca aactacacca tgtttctttt ctgccaagg tcgaggtag 300
 cggatgtgga ttcctctaga aactgtgtc cctcccatgt ggtagtctcc tagccgtang 360
 tgctgtgaaa gactgatata tagctcatac tctcgtagcg ttataaatgt ttccttggtt 420
 gtcatttgat gtg 433

<210> 2975
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-D9
 <400> 2975

gacggggccc aagaggcggt cttttggtgg tgggtgtggag agcggcattg atgcatcgat 60
 gcttgacag gatgggtggg ctgagggtga ggagggtgaa ggtggacagc gggaggagggt 120
 aagagagatt aacataaatg aggaggcacg ggctacagat ggtactggca gggcaaattgt 180
 cacaggagga gttgaggacc tgggcagctt ccatttggtat gttgatccaa ctgaggatat 240
 actagggaa ctgggaaatt tacacaactt gccgttcttg aggggtggata atcttgggag 300
 gatgctgtaa ctgttgccat tgcttgtcat ggtgctgaag acctgaagta ttgtatgatt 360
 agctggggtg gaacagatgc tccaaggatt gtctttacct ttctgttgt aattcctggt 420
 a 421

<210> 2976
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-019-Q1-E1-G11
 <400> 2976

tccggagcga cgaacggcgc gatggcgaca caaattccaa gaaggaccac ctccttcagg 60
 caatgaccgc caacttcaaa aacctccaac cgctcaaccg tgcccgccag aacaagggtga 120
 agtccaagac ggcggcggtg gacaagggtg aggcggattt tgaggagcgc gtcgcccaga 180
 cgtagatctg gttcggcgag gcccggaag agttgaggac tgcctaagggt gagctggatg 240

tgcgcaagcg agagctcatc ctgaagcagg ccgacattga gaaggtccaa gaggcggcga 300
 aggaacaggg caccaaggat gaagctgccc ggcagcagca gcaagctcta ctggacaacc 360
 aagaagaaca ccttggttgcg cgtgagcaag cgcttgccgc cacgcttggc agcaaggacg 420
 g 421

<210> 2977
 <211> 427
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-019-Q1-E1-G4

 <400> 2977

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 atgaggtttt cttccgcata aagagatcca cacagctgaa gaagctgatg aacgcttact 120
 gcgaccgtca gtctgtggat ctcaactcca ttgctttcct ttttgatggc cgtaggctcc 180
 gtggtgagca gaccctgat gagcttgaga tggaggaagg cgacgagatc gacgccatgc 240
 ttcaccagac cggaggggtgc tttcctggcc cttagaagga gcttgctgca gcctggctgt 300
 tctatgtcgt atgctacctt tagaactaga gtaaaatgta agaagtgaag gaacttgtga 360
 ggctatgggt ctgtgccata gcctganggg ggggtctggag gtgaaacaac atcggagtac 420
 tgttgat 427

<210> 2978
 <211> 219
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-019-Q1-E1-H10

 <400> 2978

attcgcggat cgatggggag gtccaccatg gagctagggg tgcgggatg aagaagacc 60
 tcgtccttca acccggggcc cccccaaag gggaacgcaa caaccgggtc aatccacaat 120
 atccccctta aggccaatgg gcaaccggga ttccaaaagg ttcatttgtt atgttcccaa 180
 tcctccaaaa aggttggcct tgcctcaaa aacgggcac 219

<210> 2979
 <211> 396
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-H11

<400> 2979

tacgggtcaaa aattcccgga cgcacgggga tgaataaatc cattgtgaga agagcccttg 60
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 aaggcttaac ctaaactgaa ccgatggacc tacaaggga cctcgggca atctgatgtg 180
 tgtgtataag tactgctgac actgcagccc gtttcctgag gaaatttggt gggtcggtga 240
 aattgacttg tagttgtact actttgagct gtagctgtag ccctaaatca tattgtgtcg 300
 aactgaagat gtacccagat aagttcattc atgaatgcag cattttggcg ttctgcagct 360
 gagcagagtc aatgcctaaa acataaatgg tcaaaa 396

<210> 2980
 <211> 383
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-H12

<400> 2980

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 ttttcttacc aattgtccaa gaaaaaccac agatagaagt agatcagtc caatttctcc 120
 tagcaagact gagcctttgc aattttcttt tcattgtttg cattgttgaa ttatcggttg 180
 catcgccgtg tcgagttgct ggtcttagtg tctagttcct ttagagtttc gagttctggt 240
 cacattagtc atgcagctgc tgcattcatta tcccatccgc tgtccaccat ctcatccacc 300
 aatttcacca tgtgctacgc actgtttatt gtcattattca tagttgaggt cactcacatc 360
 ttgcctgat cgaatctgca tct 383

<210> 2981
 <211> 409
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-H2

<400> 2981

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ctgggtctgc ggggatcaaa aaagggcgtg gaaggccaag aaaagaaaag aagccagcag 120
cagcaatgtt ggctgaaact gaagctggag atactgtgtc aactgggatg aagggggcgc 180
ttgagaatcc aatatcaggt aatgtcgtgt caactggaac caatggagca cttcttagaa 240
cggagaatcc agcggcaggt gattttgtgt ccatggtaat gaagagaggg ccttgctttg 300
attgaaacct ggtttgagga catgtctgaa gaagctagtc catgtgtagg aaaggaaacc 360
aggcctggcc tgaagatgca tgctggatgt gtgatttgag tctagtctc 409

<210> 2982

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-H3

<400> 2982

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agaagaagcc agcagcagca atgttggctg aaactgaagc tggagatact gtgtcaactg 180
ggatgaaggg ggcgcttgag aatccaatat caggtaatgt cgtgtcaact ggaaccaatg 240
gagcacttct tagaacggac aatccagcgg cagggtgattt tgtgtccatg gtaatgaaga 300
tagggccttg ctttgattga aacctggttt ggagacatgt ctgaagaagc tagtccaggt 360
gtaggaaaag aaaccagcct ggcctgaaga tgcattgctg atgtgtaatt tgagtcgagt 420

<210> 2983

<211> 399

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-019-Q1-E1-H4

<400> 2983

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catacggagt gacaaatccc agtcccgatc cgtgtcaacc caacagacac tttcggagat 120

acctgtagta tacctttata gtcaccagc tatgttgtga catttggcac ccccaaagca 180
ctcctaagca tccgggagtt acacaatctc atgggtctaag gaaatgatac ttgacattgg 240
aaaagctcta gcaaacaaac tacacgatct tgtgctatgc ttaagattgg gtcttgtcca 300
tcacatcatt ctcccaatga tgtgatcccg ttatcaatga catccaatgt ccatgggtcag 360
gaaaccatga ccatctattg ataaacgagc tagttaact 399

<210> 2984
<211> 415
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-019-Q1-E1-H8
<400> 2984

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tgcttccctg aggcctaaaa gatcaaagag actagtgagg agcacgggtg aggataagga 120
accggttgct gcttgtgatg ttgagaaacc tgcagatgca gctgaaaaca atgacaacaa 180
tgatgcagaa gaggttcaag accagactcc ttctgcctag ttgacctact gggctgacct 240
gatgagaaca taagatgcga atggcaagac tctaatttgt ggtgtcgagt aggagcatca 300
aagatggcac ccagaggagg agctctggat ctgcttaagg tgttacgcgg tttattaagt 360
attttaactc tgctgtgcag cttcttttca gaagcctggg actgcaactt ggggtg 415

<210> 2985
<211> 437
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-020-Q1-E1-A3
<400> 2985

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tccccgggtg gcaaaacggg ttgacccaac cgggtgcttg gccaaaccatg aggtcccttg 120
gttccttccc aaattcgggg tattcgaagt tcaacacttg ccaactggctc gcatccttag 180
ggtgactcag catcttgtct ttttaattta tctccggatc atttccgtca tcttcccgct 240
tcttctcctt cctatccgtg tgccaacgca tgagctttgc taccttaggg cccgcgaaat 300

accgctgcag acgaagagtg atcggaatgt atcacaccga ttttcgagga gctttcctcc 360
 tcattcttgta tcgagtgaag ccgcacaccg gacatatggt agactccgag tgctcgcccc 420
 gataaatgat acaattg 437

<210> 2986
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
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 <400> 2986

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 tcgctcgag tgacgcttct tcttcagtca aagaggcaca aagggtatca acaaccagct 180
 tcacgccccaa ggactcaagg aggaagcact gggactctgg gagcattcag gattggttgg 240
 agacggcgga attggttggg ccgcggcttt acagctgccg ccattgccgg aaccacgtct 300
 gcctccacga cgatatcatc tccaaggact tccagngaag gaatggccgc gcgtttctct 360
 cctaccacgc catgaacgtc accacaaggg gcaaaggagg acaggcagct catgacaggg 420
 ctccacacga tcgccgac 438

<210> 2987
 <211> 261
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-A9
 <400> 2987

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 actgctggc ggaaggcaac tgataatggg gcttaatcct ccttttggag tcaaagcagc 180
 tctggcgaac agatttatcg acaaagcatt gtcttttaag cccaagcttg ttataactaat 240
 tgtoccaaaa gaaactaaaa g 261

<210> 2988
 <211> 410
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-020-Q1-E1-B1

 <400> 2988

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 gataatccaa gaactagata ctcaagatgt ccataaccgg ggacacggct aatcatgatt 180
 agtttgtaca ctctgcagag gtttgcgcac ttttccccac aagactcgat cgcctccggt 240
 ggattttctcg cactacatgg tgtttgagaa acggatgacc gagacacagt cttttagaag 300
 cgtttagcacc ttacgatggg tagacagtac cacctacatc ccctacatct gctagtatac 360
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<210> 2989
 <211> 432
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
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 <400> 2989

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 aacactaccg ggggctatta actggcctcc caaactaaat cctcaatatt ttgctcttac 120
 attggagatg aggtttcatg atcatgctta gcatgacaac ccatagaaag gaaccgatag 180
 cgggactatt ttctttggaa gacattttctt ctgttaaaca gtaatataac atgtctctcc 240
 gcgtaccttt gtttataaaa ccgtatggcc agattgcctt gtttgttgta aatctttgcc 300
 ctcataaagg ctttataaag taggacaaac actcctcgac tattggccga ngagggtggaa 360
 gccgatggtc ggtcaacaaa gttttgtaca atgcagatcc gagcattaat gacttaaagt 420
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<210> 2990
 <211> 322

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-C7
 <400> 2990
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 tatcgtcatt attgcctttc acttgcacga ccgaatgggtg tgtataataa taatagtgtg 180
 catgcattgg actaagctgg aatcctgaag cattcaactc aagagaaaag gccaaggtaa 240
 tgtgggcttt gagtttaatt aacaatccag gctattggaa cctctaaaca aatttaaaat 300
 gggcctctaa actcgaaccc cc 322

<210> 2991
 <211> 430
 <212> A
 <213> Triticum aestivum
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 atcacgtca agtccgtgga gaggaacaag tcttgggagg tggaagggtg caactaccat 180
 ccaggcacca gcaggctcta taattgtctt acgagaggct ggaaggcctt ctgtaaggag 240
 aacgagctca aggcaggaga catctgcacc ttcaaagtcg tcaacagcac gctgtggcat 300
 gttgtcatcg accactgcta gaaatacggg tcatagatga tcatggctga tggcggacct 360
 gctgggttttg caaacctaag tagtatcatg atgaatattg tggtgacatg ataatccaca 420
 gctgggtgttg 430

<210> 2992
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-G4
 <400> 2992

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 gatattaaag ttgtgctagt tgagtagttg cgaatttgag aaatacttgt gttgaagttt 180
 gtgattcccg tagcatgcac gtatgggtgaa ccattatgtg atgaagtcgg agcatgattt 240
 attttttgat tgccttcctt atgagtgggtg gtcggggacg aacgaagggc ctttcctaac 300
 aatccaaccc cctaagagca tgcgcgtaat actttgcctt gagaacctgt agatttttgc 360
 agtaagtata tgagttcctt aagaccaatg t 391

<210> 2993
 <211> 418
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-H10
 <400> 2993

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 ccggtatcat acaccacca tataccttcc tcaaaacagc caccgtacct acctactatg 180
 gcatttccat agccattccg agatattgcc atgcaacttt ccaccgtttc gtttatcatg 240
 acacgctcca ttattgtcat attgctagca tgatcatgta gttgacatcg tatttgtggc 300
 aaagccaccg ttcataatta tttcatacat gtcactcttg attcattgca tatcccggtg 360
 caccatcgga ggcattcata tagagtcata tttgttctaa ttatcgagtt gtaattgt 418

<210> 2994
 <211> 335
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-H12
 <400> 2994

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 ttccgggtca acttaatgat ccagttccc ccatgtacat gggaatgaag ccgtaagact 180

agtttttatg cctaccccg c aacttaattc gtttaattta gaactgtcgc gtgtactgaa 240
 tttgtgagtt atgcctgggt ttctgttgat gtaagaactg ttaatatggt gaccttgata 300
 tgctgtcagc tcaagcaatg aatatgaact atttt 335

<210> 2995
 <211> 404
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-H4
 <400> 2995

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 cctacaggca cctgggtggg ctaagagggtg tggttcccta aatcaatcaa attagtatgc 180
 attgctgaat atttgttggt gagcgattag gagtgatgct gtcatacgtg tattgacgtc 240
 cccttggggg tcagaacatt cagacaggta gttgatgctg ttcttaagca gtgtacgggt 300
 atgaatggat gatgatctat ccagcttgga gcatgttggt actaatttga aggttgctgt 360
 acaattgggt atgagttatg aattaagggg agtgaattgt agtt 404

<210> 2996
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-020-Q1-E1-H8
 <400> 2996

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 ctttccaatt tagggccgac cgtggaactg atggtgaagg tacaaccagt gccgtcccc 180
 ttgggggaca cttcttgggc ccagggtggac ctgcattgct tcttgcgctt gcggtggagc 240
 tcgatgggtgc gtcctcgacg ggtagcgcag cacttcgaag aggtgcgctt gccggagtag 300
 acatcagagc tcttgccgga cttggtcctc atcttcccc cgggagcctc agccggcaag 360
 tgtgttgatg ttagttgcgg ctgctgcttc ccggtagatc ttgccggcac agata 415

<210> 2997
 <211> 342
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-020-Q1-E1-H9

<400> 2997

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 atctggccac aagaaagaaa tattgttgta gaaccaacag gaaagaagtc cgcgtgtctg 180
 atatgtctgc gtgcttgta cttaacctag accgggtccc tgggttcagtt cagttttggt 240
 tcacttctat tgtgatagcc ggggaaataa ccatgatttt gccagatata tgtaaccgcc 300
 tttgttgta cgagaagtaa ccatgggctc aatttgattt gc 342

<210> 2998
 <211> 471
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-A10

<400> 2998

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 gtataatgct gttctagaga atgcgtgcag tgagcttggt gcccgatatg ctgctatgga 180
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 gggatgatga tgaaacttta cgctatcatc ttttttattt ttctgttcca atgaaggcca 360
 cttctaattc aaaaacagcc ttttgattc tctgtgagt ggatctgagc atcaataatt 420
 agcctgaata cgggacggat atgccttggt gcgctatcaa ccttgctttg t 471

<210> 2999
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-021-Q1-E1-A2

<400> 2999

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aagtggcttt ttaatgccaa catcagaatc ttcttgccga ctggtgggaa tagcatcatg 120
ggatccttga gctacagaag gatctacact gtcaacggca accaatacag aagcatcaac 180
actaccacgg ccatcaacaa cacaactgcc ctgattcaga tcaacatgaa gttccacgct 240
atgttctcca acctgtggaa agttttaaata acacagagtc aacctgtgga aagtttataaa 300
tacacagagt aacacaaaaa tgagcgtggg gataactaac acaacaacac acaacacact 360
tatgtcaaaa gactgctgac aacatacaca taacaactac agtccccata tgcaaaacaa 420
caccaacaca 430

<210> 3000
<211> 379
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-A3

<400> 3000

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tgtgtacag cctcgatgac catgtcctcc ctttcttcag gttctacagg ggagcccagg 180
gcagggtcag caacttcagc tgcataaatg caaccatcag taagttcaag gacgccctcg 240
caaagcactc gccggacagg tgcagcctcg gcccggcgcg ggggctcgag gacgcggagc 300
tcttgactct ggcggaacac agggacctgg aattcatcta caacgagaag ccgacgctgg 360
tgccgatcgc cgacgctat 379

<210> 3001
<211> 420
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-A5

<400> 3001

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gtccaccccc aaactgtata aaagtgagga agattggttt agtagtgcag gaattatggc 180
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gcggttttga atcgagtcg ggagtttgct aggtcccccc ctcttttgac ccccgaaact 300
ctgtacagat agatgtgggg agttgatgat gactggatga tgatgctttt ggtttggatt 360
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<210> 3002

<211> 371

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-A7

<400> 3002

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ccatgtgcta cagcctccat gcccatgtcc tccctttctt caggtttctac aggggagccc 180
aggggaaggg cagcagcttc agctgcacca atgcaacat caagaagttc aaggacgccc 240
tcggaagca ctgcgccgac aggtgcagcc tcgggccggc gcggggcctc gaggaggcgg 300
agctcttggc tctggctgca aacagggacc tggaattcac ctacaacaac gagaagccgt 360
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<210> 3003

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-B1

<400> 3003

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gagttgcgtc ctgcttcagc cacccaatcg ttgctgtcaa cggtttagtc aaccctggag 180
acttttctac tttgcaaaga gtatatgoga aactttgctt ttccagaaca ctttaggact 240
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aagttgcatt atgctatctt ccttttattt atttttgata aagggtggct tttattgcct 360
caaatggag tatcaaggag atacataaca caatgagcac acaccgggc tctgtataaa 420
taggatgcac aca 433

<210> 3004
<211> 505
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-B12

<400> 3004

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agttagacgc ggttactcca ttgtatgaag gatgcaggcc cgaggatacc cgcctgaaag 180
taacgctaatt ggctctggag atgaaggtaa aacacaaaat gaccgacgca tgcttcgacg 240
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aggagggcga gaaaatcgtg tgtcctctgg atttaccgca cgtgaaatac catgtgtgca 360
tgaacaattg catcatttat cgggacgagc acgaggagtc taccatattg cgggtgtgcg 420
gtgtcactag atacaagaag aggaagaaag ctctcgaag agtggtgtgg tactttcgga 480
tcaactcctg tctgcagcgg tattt 505

<210> 3005
<211> 425
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-C3

<400> 3005

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gagctaagac atgactcacc aggtctgctc tatattgtac catacagttc atattttggt 180
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 cacct 425

<210> 3006
 <211> 444
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-C4

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 acaaccata atgcaataaa tatcaatata aaagcatgat acaaaatgga catatcagtt 180
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 attattagag gaattacaag gaaatggccc agggttgaaa ttacctctat atgcggttatt 300
 accaaaattg ttcgtaccaa caaaattcac aaccatagat tcattattat tctcaatcaa 360
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 taggattgat gtagatctcc ccgg 444

<210> 3007
 <211> 509
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-D12

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 ttacccaagt cacttggggg ctctaaatt tatatgagcc attttataat aagtgttctt 180

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tggtaaactg gcctaattgag aagtactccg gcctcgggat aggagggtga agccgtaggc 360
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<210> 3008
<211> 421
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-D3

<400> 3008

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catgctggaa atagaactgc acataaggta ttgcaatccg gtttttattg gcctaccctc 300
ttcaaagatg ccataagtt tgtgttgtct tgcgatgaat gtcaaagaat tggtaatat 360
agtagacgtc aagaaatgcc tatgaactat tcgcttgta ttgagccatt tgatgtttgg 420
g 421

<210> 3009
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-E4

<400> 3009

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ggatcagcag ctccctcctt gtagtacgcg aacaccacgc cgccatcatc atgcatgctc 180

tgcgaacaa agaactgaag gtccttgagc ttgctaagaa gatacttcgt ggcagactca 240
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tagcgcttca tgtgagagat aaactgcttc ttgtcaaaag cagggttgctc ctgaagacgg 360
aagggtgtcaa caatgtcaac caccttcacg gcttggtcat cgacaccctc atcgtc 416

<210> 3010
<211> 337
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-F10

<400> 3010

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cgcatgtagg tgcgcacctg cctggaatgc agctcgggtca gcaggctcgt cctcctgcat 180
gcaccatcga gacagcttac ctacgtccct ctcggttcgtt tgatccagggt cggcactgag 240
cgcaactacc tattcacgca gcatgcggtc agtcagcagg cagtaatcac ccgccgggta 300
ggtaagctg atagtttatt tccaaccaag aatttgg 337

<210> 3011
<211> 296
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-021-Q1-E1-F3

<400> 3011

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ttgcatccag tttaggcctt taggtaccct atttatgcat catgagcgtt taatttcgag 180
gtatgaccta atttaagtgt ttttatcgag taaacaagta tcaactgctgg tgcttctgga 240
ttaaagaaa aaaaaaaaaa gaaaaaaaaa aaaaaaagaa gaaacaaaaa aaagaa 296

<210> 3012
<211> 65
<212> DNA

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-021-Q1-E1-G3
 <400> 3015

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atcatctgct gtcgattcga gttcgtttgt cggcgattcc gtaattaaat cgcagtttct  300
acatgccatt actggaatg gttgcaggtt tttaagctcg ttggaacttg cttacggtgg  360
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<210> 3016
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-021-Q1-E1-G4
 <400> 3016

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tacaagatct acatcttcaa ggtgctcaag caggtgcatc cggacgtcgg catctcctcc  180
aaggccatgt ccatcatgaa ctccttcata aacgacatct tcgagaagct cgccggcgag  240
tccgccaaagc tggcgcgata caacaagaag cccaccatca cgtcccggga gatccagacc  300
tccgtccgcc tcgtcctccc cggcgagctc gccaaagcac ccgtctccga nggcaccaag  360
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<210> 3017
 <211> 494
 <212> DNA

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<400> 3021

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gggtcccttc attacaacaa gctatgatta tgacgtcca cttgatgaat atggacttgc 120
aagagaacca aagtatggac atcttaaaga acttcataga gctattaagt tatgtgagcc 180
ggcattgggt tctgttgatc caactgtgac ttcccttgga agtatgcaag aggcccatgt 240
ctaccgatct ccatctgggt gtgcagcttt tctcgcaaac tataattcta actctcatgc 300
gaaagttgtc ttcgacaatg agcattacag tctaccacct tggatcaatca gcatccttcc 360
tgattgcaaa acagttgttt ataatactgc aacagttggg gttcagacat ctcagatgca 420
aatgtgggtcc gatggggcct cttc 444

<210> 3022

<211> 284

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-A3

<400> 3022

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agaatcgttg atcaacgacc atggaccatt gtcactctcc attgtggcag catcagataa 120
gatcaactac attcgttttag gggaaaatgc aatgcaagac ttgctgggta agacggtttg 180
atcaccttgc aggaaatcat caatattttg gcggatttca ccgcgttggg gggggaactt 240
gtcccggatc ctgcgaggtt cccatcgaaa atgctcatcg agaa 284

<210> 3023

<211> 282

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-A4

<400> 3023

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gacagataag ccaaccactg gatgtgggtc tgagggattt ttgcagtggg gtttgtacgg 120
tgctatgctg ctgaactgct ctgtgtttgg gatttgaaat aaaacgaagg gagatgtgcc 180

ccgctcttaa aaaatcaaaa gaaaacaaaa agcaaaaaat ccaaaaaaaa aaaggtttac 240
 aaaacgatcc aaacatcaag taacactcat atgagatttc at 282

<210> 3024
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-A5
 <400> 3024

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 tccacgttac ctttcctaag tgcaagatca ttgtgctgtt tctgtggact tccatggaga 180
 aaattcagat ttttatggca tctctgatcc agcgaggatt cgacagcaca tggtagcacc 240
 cttgctcacg gcggcacaac atccccggaa cctcccatcg tctcatcttc gtacctgtct 300
 cttgtgtgtg ctccgtgcac gtctcgagag ctccccgtcc gttacctatc tccgtccggt 360
 gcaagccacc gacaccatga actgatattc ctgtaggttc ctcttgggaa tctgtatcg 419

<210> 3025
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-A7
 <400> 3025

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 acaagccaaa cagaaacaaa tagctgccac caaacaagca gagacaaccc tagttcttgc 180
 aacaccttcc acagtaccac cagctgcacg atttactcgt tgggtcaactc agctagcagc 240
 acattcccaa gctcccttgc cacctgacac tacttctgaa gcaactcttga cacaagatga 300
 gttggcaaga tcagatgaac tttgtgagct tcaagtgcaa gaaggttggt gctggagtca 360
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 tatgtttc 428

<210> 3026
 <211> 435
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-022-Q1-E1-B1

 <400> 3026

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ggcaattcat cctgcatggc tgatgcttgc aatgaaatta gttcctgcaa tgcttcaccc   180
atggaatata gtggcaattc tgattctgat actgaaattt tccgagtcaa gcgcagggtcc   240
agcatattag gaagatctgc tcctgacacg aagacaacaa acatgtctga acagaagggt   300
ctgaagcggc tgaagaatgc atccccagaa acacaacatg acaataagcg acctgaagaa   360
gactctgagc gtacttcagt tccctcagtt agtatgaggc acaataagtc aaattctgcc   420
tcttctgang aagat                                                    435
  
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<210> 3027
 <211> 138
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-022-Q1-E1-B10

 <400> 3027

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atatctactt ctaagtat                                                    138
  
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<210> 3028
 <211> 431
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-022-Q1-E1-B3

 <400> 3028

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cctgtgtaga tagtagcccc tgaggctcgg tgtgttgta aaaatgacag cgcgccgagg 120
atcataatcc caagtataat gtgtcgccct tcctatgtag gtggcgaagg gtccggtggc 180
tagccagact gataaatttg ctgaactaaa gcggaactt gacgtggcgg atgccgacat 240
cgcgcttggtc aagaagcgac ttgacgagtc acaaggtatg caatttctcc gcagacacct 300
ggtaagggag cttgatgccc gtgccttaca acatgtatgc ttgatgcaga tgggtgcagct 360
gccatggaga accttcgggc ggagctcgcc cgagccaagg agcagaccag atagagtgat 420
gcggctgcct t 431

<210> 3029

<211> 435

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-022-Q1-E1-C1

<400> 3029

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tcggagtgga gatagatatg gacgtgacag gtacagggag agggatcatc atcgtcgtag 120
caggagtctt agcgctagtc ctgatgatta caagaggcgt ggcagagaca gaagtcctag 180
tcgtagcagg agccgcagct acagtcctga tgatgacagg aagggtggca gagacagttt 240
gtcgctgca cgcagaagca ctagtcgctc cctcgcgaag acaccacctc ctcgcaagac 300
accacctcct cgcgaggggt ctctgctan gcgcaatgat gaccggtctc ctgttgggag 360
caatgatgac cggctctctg ttangcgcaa cgatgaccgg tctccaggct ctcgtagccc 420
ttcaacatga gctga 435

<210> 3030

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-E1

<400> 3030

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gagtgcctcc aactaacaag agtcccaggg ggagttttgt ttgcaattat tttgatttag 120
 ttgcgataaa gcatgggact gggcatcctg gtgaccaacc atttatctcg tgagtgagga 180
 gcggagtcca ctctcttga gaataacccg cctaacaatgg aagatacaga caaccctagt 240
 tgatacatga gctattcgag catacaaaac atgatatttt tttgtagggt tagagtttgg 300
 cacatacaaa tttacttga acagcaggta gatacagtat ataggtagggt atagtggact 360
 catgtggaat acctttgggg tttatgggat tttggatgca caagcagtat tcccgttag 420
 tac 423

<210> 3031
 <211> 378
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-F4
 <400> 3031

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 agtaggcgat ctcttgccc ttacaaattc cttgggtcaa ctccacaatc ttgtcggagg 120
 ctcccaagtg acacctagcc aatctatgag acaccactct ccaagaagta acaaattggtg 180
 tgttgatgat gaactccttg ctcttgtgct tcaaatgata gtctcccaa cactctactc 240
 tctctcgcat gatttggatt tgggtgaaag aagatttgag tggaaagcaa cttggggaag 300
 gctagagatc aagattcata tggtaggaat gaaatatctt atcctcaaca catgagtacg 360
 tggttcactc tcagaaac 378

<210> 3032
 <211> 282
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-022-Q1-E1-H1
 <400> 3032

gggtgttggtg ctgacgcagt tcatgtatac cactgtcttg tgtttcatct ctttcactgt 60
 cgtgttgact tgtcagaacg tgctgggtctc tgtgggtctg ctgtgtgcca taatgtcctc 120
 ctggctaatac tatgcgactt ttgcgcttga tcgactaaac accatccact ctgggggatca 180

atctcgtcaa ctcgcttcac aacatagaca ggcgcatgcg tcattcttcaa tcaggcatta 240
atgaacactt ttaaccctcg agaagcgtgt gttttcaaat tc 282

<210> 3033
<211> 417
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-022-Q1-E1-H2

<400> 3033

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gtccaatccg ccttccctcc cgacctccat aaattaaggg accttgcaac ctaccggttg 120
ccggaagctt cttcaacttc cttctccctt tctccttcgg ctcccaactc cctctctccg 180
atccagcgat ctctcgggtc tcgcgccga tggcggggcc gatccgcgtc accatggagg 240
tcggcgccga cggcgctcgc ctcacacca tctgcaacct gccggtcaat gctctgcacc 300
ccatcatcat ccangggctc aaggagaagt acgccgaggc ccttgatcgc gacgacgtca 360
aggccatcgt cctcaccggc gcggcgggca agttttgtgg aggccttcgat attaattg 417

<210> 3034
<211> 407
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-H4

<400> 3034

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gatgaagatc tactctgtgt caactaggca ttattttgct ttgggtgcc tagtatctga 180
ggaactctcc taaaactca aagagttgcc taaagtccgt tgggttcttc ctgattcata 240
cctggatgtc agaaataatg actatggagg agaaccattt atagatggac aagctgttcc 300
ttacgacccc aaataccatg aggagtgggt gagaaacaat gcccgtgcca atgatagatc 360
tcggcgcaat gacaggcctc gcaactttga aagtccagga actttga 407

<210> 3035
 <211> 247
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-H7

<400> 3035

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 tctgctcgga atggcaccgc agtttggccg caagtgaag cctccgaata agaatttcg 120
 gccgggggag tagcattccc cttgggttaac aaccttggaa gagatctcca gagtctggca 180
 accatttttg gacaggttaa cggaaggccg gattgaaacc acaatttcca agtcaaaact 240
 ggtcgat 247

<210> 3036
 <211> 392
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-022-Q1-E1-H8

<400> 3036

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 ttaacacatg gtgggcccac aaccacagc tccacaggat cgagacctga ctctcctgta 120
 caccctgttg ccaaagttaa tcttagagct tgacttcgta tgtagttcac gggccacctg 180
 cctagtgatc tattctggta tcagacgcaa tacatattcc cattgctctg aaccccttcc 240
 acatttcgta tcaggcaacg aacgattgcc tatgcgcttg aaacttctac tttgcacatt 300
 cttactttgc tctcgataat ttcttaagtt tcaattcaag agttattttt cgccaccttc 360
 cctaagttaa tctaccgat aagcaccat gc 392

<210> 3037
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-A11

<400> 3037

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 aggtggagct gtcattgcct tcttacactt gccggtggag ctcgatggtg cgtectcgac 180
 ggttgtgcag cactccgaag aggtgcgctt gccggagtgg gcatcagagc tcttgccgga 240
 cttgggtcttc ttcttcccc cgggagcttc agcggcaagt gtccttcggt ctgctacggc 300
 tgctgcttcc cgatagatct tatcggcata gataagagca tccttcttgt cgccagggac 360
 agagataaca cttattgtgc ctggcatttt cagtacgttg tacgcatagt gggaggctgc 420
 catgaac 427

<210> 3038
 <211> 369
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-A3
 <400> 3038

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 tcggggatct agcatttggg gttgtcttct ttaatttgg ttccgtagtt agaccttgat 180
 tgtactctga tgatgtatgt ttaattcatg tattgtgtga aatggcgatt gtgagccaac 240
 tctttctccc attcttggtc attacatggg attgtgtgaa gatgaccctt cttgcgacaa 300
 aaccaccatg cggttatgcc tccaagtcgt gcctcgacac gtgggggtatc gtgggtgtta 360
 caacagtgt 369

<210> 3039
 <211> 351
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-A4
 <400> 3039

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 tctcgggggc ggcgcgctgg agacgcagat gggtggcggg gttaaagcca aggaggagta 180

ccgctttggc tcgtccaagg tttctccctt gcctacgggtg aatgccgaag aagtggccgc 240
 tgccaagggg aagaaatcca gggcgaagaa ggctgcgtcg cggatagact tggacaaggc 300
 tgaatccctt gcgtataaag ccaggattaa ggcgacggag tctgccaggg t 351

<210> 3040
 <211> 397
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-A5
 <400> 3040

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 tctcaagac agccaccata cctacctatt atggcatttc catagccatt tcgatataata 180
 ttgccatgca actttccacc attccgttat tatgacatgc ttcattcattg tcatattgct 240
 ttgcatgatc atgtacttga catcgatttt gtggcaaagc caccattcat aattctttca 300
 cacatgtcac tcttgattca ttgcacatct cggtagacta ccggcggcat tcacgtggag 360
 tcatattttg ttctaagttt tgagttgtaa tctttga 397

<210> 3041
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-023-Q1-E1-B10
 <400> 3041

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 gatggtaagg agtcaggtag gacacctaag tttgattgtg ttatatcttt tatggatacc 120
 gatgcttttc gtggatttag tgctaaatat ggacttgact ctgagatagt agcttctttt 180
 tgtgaatctt tcgctgctca tgttgatctc cctaaggaga agtggtttta atataatcct 240
 cccactgaag taaaagtagt tgcacctatt acagttgaag aaaagactat tacttataac 300
 gatcctattg ttctactac ttatgttgag aanacacctt atcctgttag gataaaggat 360

catgctagag cttcaactat ggttcgtaag agtaatacta gaacatatac

410

<210> 3042

<211> 423

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-023-Q1-E1-B12

<400> 3042

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cggcgagggg aagcagcggg gcaggaagaa gggcagcaag gccagaagg gcgtggagac 120
gtacaagatc tacatcttca aggtgctcaa gcaggtgcac cccgacgtgg gcatctcctc 180
caaggccatg tccatcatga actccttcat caacgacatc ttcgagaagc tcgccggcga 240
gtccgccaag ctggcgaggt acaacaagaa gccaccatc acgtcccggg agatccagac 300
ctccgtccgc ctcgctctcc ccggcgagct cgccaagcac gccgtctccg agggcaacaa 360
agccgtcacc aagttcacct catcctangc ttcacgtcgc tcgttttaac gaatcgatga 420
tga 423

<210> 3043

<211> 397

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-B3

<400> 3043

cgggccgacg ggtttgatac ttaataattg ttttgagata tggaggtagt gatattaaag 60
tcatgctagt tgggtgatta tgaatttaaa gaatgcttgt gttgaattta gcaagtccca 120
tagcatgcac gtatggttaa agttgtgtaa caaatttgaa acatgaggtg ttcttaaatt 180
gtgcatcctt atgaatggcg gtcgggacga gcgatggtct tttcctacca atctatccct 240
ctaggagcat gcgcgtagtg cttggttttt gatgacttct aaattttttg caataagtat 300
atgagttctt ttgactaatg ttgagtccat ggattataca cacttttacc tttccatcat 360
tgctaacctc ttcggtactg tgcattgccc tttctca 397

<210> 3044
 <211> 405
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-B4

<400> 3044

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gagaggctct tgctcttgca gaggatcttt acataaaca aatgtccatt gcatcagatt 120
gcaagatggc cattgatgcg atcaaagaag ggagttccgc tgcctttgga gcaataatta 180
aggagattat agctagaacg agcatttttc ttcattgtatt tttagtcatt agtataggac 240
ctcgaatgta caggcccata atctcgcaaa gtatgcttta tccttaggtt ttggccgtca 300
tgtttggtta cgccagatcg aagatctcgt atttatcctt accaacattg cgaagcagta 360
ataaagtttt gcgagatact cagaaaagaa agataatgtt ggcat 405

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<210> 3045
 <211> 437
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-C1

<400> 3045

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tcttggcact accgtgattg acaagatcaa ccctgctgaa ttgggtgaacc tgggtgacat 120
tttgggccct tcatccacac cggtaatgat caccatcact atacggatgg gagctaataa 180
catgaggggtg aagttgcctc atcccatccg tgctgtctgc aattctggac atattgtcac 240
atggattact gatcccatgc acaggaacac catcaccgcc acatgtggac tgaagactca 300
tccatttgac tctattaaga attacgtgcc tccaatcttc catctgcact accaagaagg 360
aagccatcca cgaggcatcc accttgaaat gacagtacag catgtcatct aatacatcgg 420
tggatcacgg accgtta 437

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<210> 3046
 <211> 389
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-C10

<400> 3046

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cagttagtca aggcaatgcc gagtcttatt ttacaaaag tccaggaaga caattgtact 120
tcgtcaacat gtgccatttg cttggaagac tacagtgttg gtgaaaagat aagggtgctg 180
ccttgtcgtc acaagttcca tgctgcttgc gtggacctgt ggctcacatc atggaggaca 240
ttctgccctg tatgcaagcg agatgcaaat gctggaatgt caaatttccc tccatcagag 300
tctaccctt tgctttcttc tgctattccc ttaccagctg aatcgacagc tttgtcttct 360
tttcgttcaa tggtagcagc atctcctcc 389

<210> 3047

<211> 266

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-C2

<400> 3047

aacccaccca tcacctccag ggatatccag acctccgtcg gcttcatccc ccccggggat 60
ctcgccaagc acgccgtctc cgagggcacc aaggccgtca ctaagttcac atcctcctag 120
actgaccgat tgcatttggt ttccgcatct gcatctgtac tcttgacact gcgtatctat 180
cgatcagcag gtaaaggctcg ccgtactagt acctgtgctg ggtgattgcc aacgctttgt 240
tggcccgtag gttgtcaca ctgaaa 266

<210> 3048

<211> 402

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-C3

<400> 3048

ccccggccga cggggaggat aatgaactgg ggatccaggt gcaacgcatt gacttggtaa 60
tgcgagagca cggcgttgaa gaaatcggag aaggggggat taggccagcc tagagggcgt 120
gaagatgaat ggggatctcg gtggctgtcc tatcaatcgc ggagcgggaa gtaggtcaag 180

ccaccgtcac cttgcaactca ttgaaatctg aggcgagcat ggggcaaacc ttgtccattg 240
 cttcctgggt gagcaccacc gaccgctcga tggcgggctc gaggaccggc ggtgtctgga 300
 ttgaggtgtg ggtcttcttc tcccccttct tcttctgttt cggggcgag cagagaggat 360
 tggagccggt tcaagccatg gcaggaggca gctgtttctg gg 402

<210> 3049
 <211> 252
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-C8
 <400> 3049

gacgggtaaa ttaacgtgag gctatatttt tattcaccac atgatatgtg ttttgcttgg 60
 agcgtcttgt gtgatttgag tccttgattt ttagtttaac gcgatcatcc ttgctgtcca 120
 caccttttgg gagacacatg catgaatcat gatttagtag aataatctat gtgcttcacg 180
 tacatctttt gagctataga ctattgcgcg aatgcttcag ttatagcgtt ttatctcacg 240
 acagtggggt ta 252

<210> 3050
 <211> 423
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-023-Q1-E1-D12
 <400> 3050

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 aaacgttgta ggtcctccca tgcctcagct gtatcttttg tcttcccata cacgccaag 180
 aagcctagaa gattcacgca aaggttcttc gtcacgtgca tcacgtcgat cgaagagcga 240
 acctataggt ctttccagta gggtaggtcn caaaatatag atttcttctt ccacatgggt 300
 gtgtgtcncc cagcgtcact cggaacagct agtgcgcggg gaccctttcc aaagattatg 360
 tgtaaactcat tgaccatagc aagtacgtga tcacaggtac gcatggcaag cttcttccgg 420

tga

423

<210> 3051
<211> 369
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-D2

<400> 3051

acggatgtct attcaaaggt taaggttctc ggatccaaca ataactggaa ggattttcgg 60
aaacagggtta accgattcac cggtaaaatt tacaagggt acaccactag ggccaaggcc 120
aaatctaaat acccccgcaa tctaccggaa aagggaagga acctttggag gaaccggata 180
aaaacaattt tcaccgtgat aatgcccatt gtgatgaccg aagctctctt caatgtgatg 240
gaagtttaaa tgatcaatat caacttgtaa tgtgaagaca aactcgctac tcgcggtctc 300
aaaacttgta atataatggt caacctttgt tcggtctttt caattcggag actaatatga 360
tgaattgta 369

<210> 3052
<211> 410
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-D3

<400> 3052

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tgggaaagaa caccgcaaga ttgaacccaa agctaagcac ttctcgcat gcaagaaaga 120
tcaatctagt aggccaaacc aaaccaataa ttcgaagaga cttgcaaaga taacttaatc 180
atacataaaa gaattcagag cagattcaaa tatttctcag agataaactt gatcataaac 240
ccacaattca tcggatcttg aaaaacacac cgcaaaaaga gttacatcga atagatctcc 300
tagaagagga aggagaacat ggtattgaga tccacaaata gagaagaagc catctagcta 360
ataactatgg acccgaaagc ctgaggtaaa ctactcacia ctcacgag 410

<210> 3053
<211> 413
<212> DNA

<213> *Triticum aestivum*
 <223> unsure at all n locations
 <223> Clone ID: LIB103-023-Q1-E1-E10

<400> 3053

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 agagtcacat gatttgggtgt caaagctttc gttgacgtaa ccctttatga cgaactcttt 120
 attacctcca taattgagaa atatctcctt agtcctctta ggtaactaag gataattttg 180
 tccattatcc agtgatctac tcctggatca ctattgtcct cccttgccaa actcatggca 240
 aggtacacag caggtttggt acacagcatg gcatacttta tagaacctat ggttgaggca 300
 tanggaatga ctttcattct ctctctatct tctaccgtgg tcgggttttg agtcttactc 360
 aacttcacac cttgcaacac aagcaagaac cctttctttt actgttcatt ttg 413

<210> 3054
 <211> 359
 <212> DNA
 <213> *Triticum aestivum*
 <223> Clone ID: LIB103-023-Q1-E1-E2

<400> 3054

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 tattgtgact aaaagttgct gattagcaac taaatcatat tgcatattga aacaagcact 120
 tcaggccatc tatgtgttaa gagtttaggg gcatagcttc catcatccaa ctaaactaca 180
 caacttatac taacccatat aagttttaac acttcaactga tattcttcat aacccatata 240
 attgtccact agtcagtacc atgttttgac cttgttgatc ttcaccaa at aactgggaac 300
 attaaaacac ctaatacaac agtataaact aggtgtgtct caccagtata acacgaaac 359

<210> 3055
 <211> 421
 <212> DNA
 <213> *Triticum aestivum*
 <223> Clone ID: LIB103-023-Q1-E1-E3

<400> 3055

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acaccatcac ggagggcttc atcatcctca ttggtgcctc tccgatgatg cgtgagtagt 120
tcattgtaga cctactggtc cgtaggcagt agctagatgg ctctctctat ctcttttgat 180
tctcaatgca atgggtctctt ggagatctat ttgatgtaac tctttttgtg gtgtgtttgt 240
tgggatccaa tgaactttga gtttatgatc agatctatct tatccatgag agttatttga 300
gctttgatcc cttatatgca tggttacttc tagcctcgta tttcttcttc gaatatttgg 360
tttagttagg ccgactagat caatttttct tgccatggga agaggtgctt tgtgatgggt 420
t 421

<210> 3056
<211> 258
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-023-Q1-E1-E4
<400> 3056

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tacagattat gattaaggtt gtggtgctgc caagggttca aacccgaag aattcaaccg 120
caacctttaa gaagctgccc aaattcttaa gaaagccaag gaattcaaga ttggcaagga 180
ccaccaagaa ggcccaaaaa cttttccgta caaggcgcga aaggctccgt tcaaccgcct 240
tggaattaag gccaaaaa 258

<210> 3057
<211> 421
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-023-Q1-E1-E7
<400> 3057

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acaccatcac ggagggcttc atcatcctca ttggtgcctc tccgatgatg cgtgagtagt 120
tcattgtaga cctactggtc cgtaggcagt agctagatgg ctctctctat ctcttttgat 180
tctcaatgca atgggtctctt ggagatctat ttgatgtaac tctttttgtg gtgtgtttgt 240
tgggatccaa tgaactttga gtttatgatc agatctatct tatccatgag agttatttga 300

gctttgatcc cttatatgca tggttacttc tagcctcgta tttcttcttc gaatatttgg 360
 tttagttagg ccgactagat caatttttct tgccatggga agaggtgctt tgtgatgggt 420
 t 421

<210> 3058
 <211> 381
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-F1
 <400> 3058

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 aacacaacat acgtgcgtca ctccggcacct ctgagtttgc gcaagaagtt tctggaacat 120
 tcagtcttta tggaatggac agtcagaaca tactaacatc acttcctctt tgtcaccatc 180
 gttcacacat acggggccctc ctgacaatcg aagggaacca cttccaccag accagtgcac 240
 tgtaataata gcatcatggg cttcttcaga ctgagttgga tataacccaa tgcacttggt 300
 gtctacgtgc atcctctcta agcaacgac tatcgcccaa cgcactcatt ctccgtgtat 360
 atgtctcagt caagttgact a 381

<210> 3059
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-023-Q1-E1-F10
 <400> 3059

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 acaagggttt gcatcgagac gaggaggga acaacaggaa acggggcgac aacatgccaa 120
 agcacagttt tggctgatgc atcccatggt cgccgcgtga gctggcatgc gcgggcgctc 180
 ctggcaaaac tgaccatgcc cagtgcattt atattagtac cctgagtcca aacggagcaa 240
 caagtcggct cagggggcaa gaagagaaaa gcaggagggg ccaaacata tcagcagcaa 300
 cctgtttgtg ttgtctagtg gagacacaaa cttggcaacg aaggaactga tttgtctggg 360
 gcttatcata cactaagttg acttttatca ccaaactca gct 403

<210> 3060
 <211> 408
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-023-Q1-E1-F9

 <400> 3060

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 aatgcgccct gtcagcctgt agagttaggt atgatagcac tgtttgctat ctaatcagtg 120
 cataatgatt gatttgccac atggtgaccc cttgacctat aaaaggaggc tcatggcaac 180
 catagaaagg attcggaccc tcacacgtcc ttggggcgct agccgttctc tcncgaggca 240
 aaccctgccg ggaaaacgtg ctgcgctcac caccatTTTT cgcctcacg gtggcccgag 300
 cctgggtaaa actgcccgcg tgatctctgt catgctgctc aacgctcccc tgctctttgt 360
 gcaatgtgtc atccccccgt cgaaccagca agggactcct ggtcccat 408

<210> 3061
 <211> 449
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-023-Q1-E1-G10

 <400> 3061

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 agtgagagac gaacactacc ctctcctggg gctccggggt ggggacgatt tgccccctcg 120
 ccggaagccg atgggtgatc tccttggcca ggtaccgcgc ctcccgagc ttcttgatgt 180
 ccttatcctt gatggaggag gccatcttta ggatcgaaag tatgtctaga ggggggtgat 240
 tagactactt gaccaaataa aaatctagcc ttttccaaat tttagtctt ggcatatTTT 300
 agcaacttag cacaagtcaa gcaatcaatc tacacatgca attctaagag tatagcagtg 360
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 ngagacacgg atgtttttgt tgtgggtcc 449

<210> 3062
 <211> 289
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-G11

<400> 3062

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 ctgtgatttg cttccagtga tttagccgtg tagcatcaga atgttgtttc tccttccttt 180
 catctttgca gttgtccact ctcttaaacy ggttcagaca taaaatgtga acagacatca 240
 ctatgtaagg aatacatcaa ctgtgacagt tcagtcaaaa tgcagttag 289

<210> 3063
 <211> 368
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-G4

<400> 3063

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 atgaacaaaa ggctcaccac aaggtggtgc cggcaacggg acggtgcggg tgatcggcgg 180
 tggttacaac ggagatttac aaggcactaa gtaaaccaca cctacatatg caaactaagt 240
 gttattttaa cctcaaattg catataaatc aaatactagc acatatatat atttcctccc 300
 aaattactaa actcaciaat taataactat ataaagcatt gcaagagcta atctagcaat 360
 gagagatg 368

<210> 3064
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-G9

<400> 3064

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cctctccggc ccttcttcga cgagtggccg cacgagaaga ccgggagcaa ggggtcgtgg 120
atggggctcg agggggagac gcagctctcc atctccatcg ccaacgaact ccccatcacc 180
accacctccc gctaccacca tgggtgaatga tcccaagtcc caacgagaag accgagaacg 240
aagctgcaac gagagaccat ctccacgaag aacacgcacg tacggagcga atccattggc 300
cctttcccg cgtgctactc cagctgcatg ccgccgagac ctggaccagc tagctatctt 360
gactctcgag gcatgcatgc acagttcgag tgctgaagat cttgaaaagg cggaacccta 420
ctacgacatc 430

<210> 3065
<211> 253
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-023-Q1-E1-H1
<400> 3065

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cccctatatg gtgcaagata atctgccctg tttggggaac cccgagtcaa caagataaaa 180
ttttcctatt gatggcaatg catttcagtc aaagtcaatg tcaatgtata acaattcaat 240
catgtactaa atg 253

<210> 3066
<211> 412
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-023-Q1-E1-H10
<400> 3066

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agtgcctgga agagaacaag ggtgatggcg ccaagtgccca ggctcacatt gacgccttcc 120
gatcctcatg ttctgtcagc cccaccaaca cctccgacta ccgtcccacc gtacaaaagg 180
agacctgaaa cactggtgtc tttgctgggg tggttttaca agaaaccttg tggataaatt 240
aggatgaggt gcgactgtgc aaatgctcat gtgaaagata ggataattag ggcttagact 300

agcagttttt ttttttgaga aaattatact tttcatccct caattcttcg cgaagtttag 360
atttggtccc tcaattccaa aaccggacaa cttgcatcct taactactga aa 412

<210> 3067
<211> 377
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-023-Q1-E1-H1

<400> 3067

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aggcccttac tttgatcagg agtgctctgt tgcaaggaca agcactgcan gcactacaga 120
agttttttgc tgcactgggc caatctgcaa atataagctt tgaaactttg ttgaactccc 180
ttatttccac tgctaaacca tcacagtcag gcgggtctttc caagcaggca ctattctcta 240
ttgcacagtg tgttgctgtg ctatgccgag cagctgggtga tcagaagtgt gcatcaacta 300
ttganatgct taaaggcatt ctaaacgatg acagttctac taattctgct aaacaacaca 360
tggccttggt atgtttg 377

<210> 3068
<211> 332
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-H2

<400> 3068

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cagaataggg gacggaggtg gcgggctagc aaaccacagg catgcctggg gtcttttgct 120
caccaggtgg cccccacct gtagttatct gctccagtat ttttgatata ttccataaaa 180
attcctggta aagtttcagc tcattttagt ttgtgcaaaa taggtggcct ggcgtagctt 240
tttcagggtc cgatttccag ctgccggaat tctccctctt tgtgtgaacc ttgcatatta 300
tgagataaaa tgcattagag ttactccaaa aa 332

<210> 3069

<211> 413
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-023-Q1-E1-H3

<400> 3069

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ctcggcctcg cctctcgggt aaccaaactc ctctcccaga caagatacat agcggtgctg  180
ctgtggcggc aatggctgtc aaggcgcggt tctctccca ggccttcccc cagcactca  240
acgcctacag gtccatggac gccgcggcgc cgggtaactc ccagttcctg gacgagcacg  300
ccgggtgcgc gccagcgggt ccggtgtattg ggaacaacac tgtgctcagc gatctcncgc  360
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<210> 3070
 <211> 337
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-H8

<400> 3070

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aagtactata gaaaacctat tattatcttg tttttgcatt atatctactg tattctgact  180
tttatatggc aaaaactcat caaataaaac catagaatca tcaaaacaag cacacaatgc  240
aaagaaaata gaatctgtca aaaacagaat agtctgtaaa aatctgaaaa tttcgaatac  300
ttctgtaact caaaaaatta ttaaataaac tttttga          337
  
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<210> 3071
 <211> 420
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-023-Q1-E1-H9

<400> 3071

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 cgtgtagtac ttcgtttcga taactaatag atttttgcaa taagtatatg agttctttat 180
 gactaatgtt gagttcatgg attatacaca ctctcaccct tccaccattg ttagcctctc 240
 ttgtgccgcy caacttttgc cgggtaccata caccactat ataccttcct caaaacagcc 300
 accataccea cctattatgg catttccata gccattccga gaaatattgc catgcaactt 360
 tccaccgttc cgtttattat gacacgctcc atcattgtca tattgctttt gcatgacatg 420

<210> 3072
 <211> 339
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-A10
 <400> 3072

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 acgtttgcgt tgtggtgttt gttttacaac ctgttggtgtt gtaagaacct tgtaactttg 180
 aacctgcttt gcaccttggg taatatgcat gctatctggt tatctaaaac aaaacagaaa 240
 atgacatggc ggacataaaa agtaccacaaa cagaaaatcc aaacacacaaa ctaaataaat 300
 gcatgaacag aaaataaaaa atgcggccac tccaaaggt 339

<210> 3073
 <211> 345
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-A12
 <400> 3073

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 cccgaggaat atccgatggc tgcacctaaa gttaagtatc tcacaaagct ataccatcct 180
 aacattgaca agcttggtat actatgcctc gacatcctaa acgacacatg gagtccaact 240

catcatatac gcactgttct tcttatcatt caggcactgc tgagcgcacc aaaccagat 300
 gatccccctct cagaaaacgt cgcaaaacac tggaaatcca atgaa 345

<210> 3074
 <211> 337
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-A2

<400> 3074

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 agaagtttgt agcgaatgct aaaagtgaag gtgccaccat tctgactggg ggtgtcagggc 180
 ccaagcatct ggagaaaggt ttcttcattg aaccacaaat catcactgac atcaacacat 240
 caatggaaat ttggagggag gaagtctttg gtccagtcct gtgtgtgaag gaattttcta 300
 ctgaagaaga agccatcgaa ctggccaatg atactca 337

<210> 3075
 <211> 373
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-A5

<400> 3075

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 tgttttcttg cctatttcag tgtttcgaag aaaaggaata tcaaacggag tccaaacgga 180
 atgaaacctt tgggagagtt atttttggaa cggaagcaat ccatgagact tggagttgac 240
 atcaggggaag cttcgacgtg gccacgatgc acggtggcgc gcctgcccc tgggcgccacc 300
 cccaccctcg tgggcctctc gtggctcccc tgaccgactt ctttcgccta tatatgtcca 360
 tataccctga aag 373

<210> 3076
 <211> 361

<212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-A6

<400> 3076

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 gttgttttct tgcctagttc aatgtttcga acagaaggaa tatcacacag agtccaaacg 180
 gaatgaaacc tttgggagag ttatttctgg aacggcagca atccatgaga cttgaagttg 240
 acatcagga agcttcgacg atgtccacta tgcagggtag ctctccagt accagggcgc 300
 aatcccactc tegtgtgact ctcatgactc tctgatcga gttcttactc ctatatatgt 360
 c 361

<210> 3077
 <211> 355
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-A9

<400> 3077

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 gtatcctgcg cccctgatgt aatcggaatc aaaggggaag ccgcttgctt cctcttgact 180
 tatgaattag tatcaactaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaataaa aaataaaaat aaaaaaaaaa 300
 aaataataaa aaataaaaat taaatattga aagggtttga agagaatttt ttttt 355

<210> 3078
 <211> 374
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-B1

<400> 3078

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aaacacaacc ccataacagg gcctcaaggt tatgtgcccc atcgcccctc tttctaaatt 120
 actgaaacga aaatggctaa gcctgatgtg cctcttgtat ctgttgctgg atttgttatg 180
 atttgattca ccaagagtga ttcttctaca gtctttagt atggttaaat ggaacaacga 240
 aggatatttc taatttggtt attgctagaa taattcatgg acttgatata tgctgggatg 300
 ttttgcctgt ccttactgaa gaagatgaga atggaattta attggatggg ccctttcatc 360
 gtgcttaata atgt 374

<210> 3079
 <211> 379
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-B11
 <400> 3079

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 acgttggtgg taatactacc acagtggaca atggcaaagc gtaccatgca tacacaacgg 180
 caaagaatcc cgagcctgcg cattgaccaa ggctgtttac ttgtagcaca catcatgcaa 240
 accacctcag tgaatTTTTG agctgatgcg tgctgttatg tctgttttgc tgatgcacct 300
 aattcctttg caaagctgta gtaacttgtt ttgctctagg gcaatacaac agacctggaa 360
 taaataacgt gttttaatt 379

<210> 3080
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-B3
 <400> 3080

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 gtttttttagt agtttagatc gagtctgttc ttcataccta tagtccacga taaagcacag 180
 tgaaaattag ggtagttca tcatatccga accaatctga gccttgcata atcttttttag 240

ggttttgctt tgttgaattt gcggttgcac cgtcgtgtct agttgctggt cttagagtct 300
 agtcttttag agtttcgagt tctggtcata agttgtcacg ccgccgccgc accatcatca 360
 tcgcccctgc catctaccac caccgcaccg aatccgtatc catataccac aaccaat 417

<210> 3081
 <211> 314
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-B5
 <400> 3081

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 tctagctgaa taaagtggaa tctgcgcacg catgcagaac acatcaatta cattactata 180
 ccttcgatta agggaaacgc aatatgtaca gcacagtaac atgcacgtgc agttgtaaag 240
 atacagtagt ttcgactcgt tgtgattcac gagcaacgat tgtaacacgt tgcgtcggc 300
 atctgtgatc caat 314

<210> 3082
 <211> 354
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-B9
 <400> 3082

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 gacaccagca aagagcttct ggaatggggc tccagggctc ctgctgccaa ctccaggcca 120
 cccaaccccc agtaggcca gcacgcctgc atcactagta gtgcgcatcca gcagcacgtt 180
 gccatcaaata aatgttgaac agtttatctt tgctcttctg ttatgttctt agttttgtgc 240
 ctactagtta cttgtgagct gtggccaaaa aaaaacctgc agttcaaaca aaacaaattt 300
 caaaacatgg aatccacttc atgtccgaat tccaaaaaaa gaatgctctt caac 354

<210> 3083
 <211> 391

<212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-024-Q1-E1-C1
 <400> 3083

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 tgtccttacc cagagccaga aggggcagca aggcacgtat tgtatcgttg ccatcganga 120
 taacaagatg gggtttattt catattgcat gaatttatct ctctacatca tgtcatcttg 180
 cttaaggcgt tactctgttt ttaacttaat actctagatg catgctggat ancggtcgat 240
 gagtggagta atagtagtag atgcagaatc gtttcgatct acttgtcacg gacgtgatgc 300
 ctatatacat gatcacgcct agatattctc ataactatgc tcaattctgt caattgctca 360
 acagtacttt gttcaccac catacaatac t 391

<210> 3084
 <211> 131
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-C11
 <400> 3084

ctgccccatg tgctgtatac tctatgacga tgattggcta ggttaacgct ctcgtcactc 60
 aatctgcctg gcatgtgggc aatgattctg aactctatgc aggtgtgcct tggagggggt 120
 atcatgggat a 131

<210> 3085
 <211> 389
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-C2
 <400> 3085

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 ggtcattatt caaagtcact tggggcaact gcgtatgtat tgtaacattg ccagctaaga 120
 cttttgtcta gggtttattt catatttcat tattttatct ctctacatca tgtcatcttg 180

cttaaggcgt tactctgttt ttaacttaat actctagatg catgctggat agcggtcgat 240
gagtggagta atagtactag atgcagaatc gtttcgatct acttgtcacc gacgtgattc 300
ctatatacat gatcacgcct agatattctc ataactatgc tcaattctgt caattgctca 360
acagtacttt gttcatccac catacaata 389

<210> 3086
<211> 234
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-024-Q1-E1-C3
<400> 3086

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gaggccacgg gatcccttaa aggatcctgc atttattttc ctgcatcttg gctgctcgat 120
tgggtctctg cttcattttc atcacatgat acttaagtct ttcttaacat gtgccggccc 180
atccattaag tgtgcgcca tgtaagactt tatggatgta acatccctgt tctt 234

<210> 3087
<211> 263
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-024-Q1-E1-D10
<400> 3087

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gggtgccagg cgggcgccag ccgcgcagt gtctctcttt cctctttggt gcaaattggag 120
caagcgcagg cgagatcatc aagcaaaggc acctctttcg gtggaacgag accaagacca 180
gtccaacggc agggaggaag tcattatgga gcccaagcca gcgtcaccac cagagccttt 240
ggcaggcgaa gaccaacttt aat 263

<210> 3088
<211> 354
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-024-Q1-E1-D11

<400> 3088

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caagaacaag aaagcgcttt taaatgcggg cagatgggaa aaggcaaaaa aaggaagagg 120
tgatgatatg ctgatcatgt tgctatcaca gtccagtttg cgctgggtat tggagataga 180
aaattaggca tgcacctggt gaccctggca tgccccgctt taactgcctt tgccacttcc 240
atgtcgaaga cacgccgga agagtaatca tgtcgcaaac gctgatgtgg atggacgcgt 300
tatgtttctt gcacttgaga atgagttgct ccggagtgct gtactcctgc aata 354

<210> 3089

<211> 403

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-D2

<400> 3089

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gagatgaacc ggagaaggta aatgcagaga gatgaaatgc acaaaagacg gagggatgtg 120
atggttgctt gtccgtttat tttaccagac cacttattac tgcgagtggg tgggttttgt 180
gatatgaccg ctttactgcc gcgccacgag cggggtgaga ctgcggtgca gcaccgccct 240
ctacactagt actacatcgg tcgtggttta ttagtcccc attgaattta actaaagatt 300
taactgacac aatgttattg catgtcaaca aaaactatat cgttcgattc gtatttgaac 360
atagttttca atgataaaat tttaggtgac atgcatcagc att 403

<210> 3090

<211> 399

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-D3

<400> 3090

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ggtacatgag caggccaccg ccgggaagct cctgctcgac gacatcctcg agcagggtacg 120
agcagacctc cgcacgccc gcccatgatt tggcgaagcc ttggccaccg aagatggtga 180

cggcgagggga gaagtctgac gggcggaagc atgacagcac cctcttgatc aggtcactgt 240
aaaccagggga gccaggggtg aagttcatcg ctctgtagct cgcgtagctg aagccctcct 300
cgggagtaac gtggattgtg gaggctgcag ggccgcagac gccgttcacg gagtagccgc 360
acgggtcgaa gtcgaagtcg cagatctcca tctcgggga 399

<210> 3091
<211> 274
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-024-Q1-E1-D4
<400> 3091

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gagggcctgc tccgcgagcg tggtcgagcc cgcggtcggg atccgggaga tcagcccgtg 120
catgctcggg ctctgtctcg cgagtttcgt cggcgctttc aacgctttga tagagtcggg 180
ggtgccgtga gatagccacg ggaatcgtgt gcgagttcac agcttcattg tcgcagaggt 240
tgatggctgt tcatctttgc agaacagagg cact 274

<210> 3092
<211> 378
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-024-Q1-E1-D9
<400> 3092

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tattatatta gtatttgctt tttagttttc cagaatcac cttgctgtac ccaccttttg 120
ggagaatccc acttgattag aatttattag aatactttat gtgcttcact tatacttttt 180
gagctagata gtttttgctc tagtgcttca cttatatctt ttaaagcacg gcggtggatt 240
aattttgaag aaattgttga tatctgatga ttcacttata ttattttgag agtcttttag 300
aacagcatgg tattttctat ggttctgaat ttggctctag aatgatgagc atccaagttg 360
ggtataataa aaactatc 378

<210> 3093
 <211> 372
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E1

<400> 3093

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 atagatgtaa ggagtcata ggcctcggga cggggggccaa aattttgcaa atcttgccag 180
 ctgctggaaa tttggaagtg tgtgctgagt catctgtatc gtaatatcca tgtagctgat 240
 gcatctatag gtgtttgtaa tttttttttg ttgggtgtag acttgatatt agaggatggt 300
 tatgcctatt gtgcattggc tgtctcgggt ttagaactcg ctcataaag tctccaaact 360
 cactttgctc cg 372

<210> 3094
 <211> 416
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E12

<400> 3094

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 ggatgcaata attcaatttg atacttgata attgttttga tatatggagg tagtgatatt 180
 aaagtcatgc tagttgggtg attatgaatt taaagaatgc ttgtgttgaa gttagcaagt 240
 cccatagcat gcacatatgg ttaaagttgt gaaacaaatt tgacacatga agtgtacttg 300
 gattgtgcat ccttatgagt ggcggtcgga gacgagcgat ggtcttttcc taccaatcta 360
 tccctctaag agaatgcctg tagtccttgg gttttggata acttcaaaat ttttgc 416

<210> 3095
 <211> 386
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E3

<400> 3095

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ccgttcccct cattacagaa gcacttactc tcgggtttgg gttctacctt gggtttcttc 120
actagagcag caactgattt gccgtttcat gaagtatccc ttcttgccct tgcccttctt 180
gaaactagtg gttttactaa gcatcaacaa ttgatgctcc tacttgattt ctactttcgc 240
aggtaaaca tcgcgaatag ctcaaggatc atcatatcta tccctgatat cttatagttc 300
atcactaagc tctagtagct tgggtggcagt gactctggag aaccatcact atctcatctg 360
gaagacaact gccactcgat tcaagc 386

<210> 3096

<211> 418

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E4

<400> 3096

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aggtaccagg ggctatatag tagcccccact gtcaaaactcc tatggctaag tgaaagtgtt 180
aaaccaatat agtgtgattg cctcgttcgc tgcgctacca cctccttaat ggaccaacac 240
gttgatcaa gtgtgaatac gcgttttttg caaacacccc cgcattatat gcgtgggggc 300
tgaagccgac gactgcaaac tttcagggtta tatacatata tacataaatg gccacacagg 360
aggcatcata atactttcag gcaaaagtat aaacacagcc tttataactc aataaaac 418

<210> 3097

<211> 316

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-E6

<400> 3097

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tcatggcaac ttgtatgtgt ttagccatta tgctgtcatt gcctcgctg tcgtgctaga 180
atctccttag tcgtccaaca cttagtgtga tgtgtgaata cttgtctttt gcatgtaccc 240
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ttacatcggtt gggcac 316

<210> 3098
<211> 367
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-024-Q1-E1-F11
<400> 3098

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actgcctcga gcacggcatc cagcctgatg gccagacgaa cggtgacaag accatccggt 180
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ttcagagaag agatgctgct gcctgcctat actagttcat atcaggctcg tccctggacc 300
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gtttcct 367

<210> 3099
<211> 400
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
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<400> 3099

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ccggggcgca atcgcagtgg ttctcccagt gctaccttag ccgatacaac ggaacgtaag 180
gtacaaaaac atgggagccg ggcaaaccac actattgacc caagacatga ttcagagccg 240
atgcatataa tactataagt tcgggggtgcc gcacttatga aagtgttcag acttatcaca 300

ccatgatgcg ggaaacataa gcccttggtg ttatttagcc gtaccaaagt gtacggatgc 360
aacatgtcat aaatgaacat atgtataata aagaaatgca 400

<210> 3100
<211> 175
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F2

<400> 3100

tggcagaact tttatgcctc cttcgcatc aggtacagga cactgatgaa ggatgatgacc 60
aagatccagc atctacaggg aactggaaag ctacctcagc atacgatgta tacatagtgg 120
acacatccta taggaatgtc aacgaggatc gacaggggtgc acagagggat ccttc 175

<210> 3101
<211> 316
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F5

<400> 3101

ccgggtcgac gggaaaagcg aaagaccatc atcgagagat gacctgctct gggcgatggc 60
cacgctgggg ttcgaggagt agatcgagcc cctcaagggt tatctgcaga ggcacagaga 120
gacggatggt gatcttaagc gatctgggaa gtctggtgat gtctctgtta aaaaggatgc 180
actgggtcct catggaggag caagtggcac aagtgcgcaa gggatgggcc aacaagtagc 240
atacaatgga cgactggttt atttgaatcc tcagtaccat aatggggaca tctcagactg 300
actatatgga ccatct 316

<210> 3102
<211> 350
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-F6

<400> 3102

ggtcagaata accggtcgac ggttctatct gatattgctc gactttgact ccgaggacat 60

tgatggtatg gacgcctgat gagagatatg accaagaatc agcatctata gggaactgga 120
 tagccacctc atcattgtat gtaaagatgg tggagacatc cataatgtat ttcacgatg 180
 atcgaaaggg cccatatagg gatcgtaccc ttgaaaaatt atcaaagctg cgatacatgc 240
 gtcattgtaca tcctcaactc cacgtagacc caagcagtca gcacggcgat actgctgacg 300
 cataattcac tattgagcaa tcgtccatca aagctatcac cggaaaaatat 350

<210> 3103
 <211> 370
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-G11
 <400> 3103

cgggtcgacg ggtccattaa ttaagcacta tatgcctagc ttaatggctt taaagaaagc 60
 actgccaggg agagaacccg gaagtttgag agagtcattt atttctttta tatgctttca 120
 taaagtttaa aaaccaaaaa ataaagaggg gaacccaaaa cttttcaaaa aggaaagtga 180
 aagtgagaga gacaagcatt gttgaagtgg gagagctcct tgaactttgt tcacgctcac 240
 agaaactttg tgaatcttaa ttacagaaac tttttcaaca aaaataatta cccctgtac 300
 aattccattg tattataaaa ataatgttcc aagggtgcct ttaagatggt tacaatgctt 360
 gttggtttgt 370

<210> 3104
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-024-Q1-E1-G12
 <400> 3104

ggcgggatta tgaatataag gattatthag gatataaagt ggggtaataa caacaagccc 60
 gtttaactga atgtttggtt cagctagaga aatcgttacg cccgctcata attccttttt 120
 cgacgctctg gagaataata actactggta tatcattcta tatcaaagcc gacttgtgaa 180
 ataaatgatc cgccgtcttg ctttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa taaaaaaaaa aaaaataaaa aaattaaata 300

acaaaaata aaaaaaaaaa acaacatcaa aatattcacc aaaaattaaa atatctaaac 360
atcatctaaa aaatttaaaa aataaaaaaa acccgcccc ta 402

<210> 3105
<211> 450
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-G4

<400> 3105

cggtcgacg gggggacgga cgaatcgaga gagatggttg ttgtgttacg gatgctctc 60
tctctgtctc tctctcacac acacacacac gcgcgcgcgc gcgcgcaagt aaactagaag 120
accgttctct catgtacaca caacgtatcg gcatctgtct atgtctcact catgcatgat 180
catttgcaca ttcacacctc tctatgtatg tatcacacac acaccgtctc cacactgccc 240
ttccgccaca acacacatat ggacacatac acacgttctc tctcagtcac acacacaaaa 300
tcagtattaa aaaactaggg cgcacctaaa acgtccaaat ccaaataaac acgaactgca 360
gctaaattca aatatatgga aatattgcag cgtcaagaac tttcacagga aaaaagttga 420
gtaatactcg aggattgttt cacacacaaa 450

<210> 3106
<211> 373
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-G9

<400> 3106

tcccgggccg acggggataa tgaagcatcc atcaatagat tcttgtcacc agtcatgtgg 60
tttgtacatc cactatcgag gacccactca gtggccttgg gttgatcatc ctacagatga 120
attagtgcac cttacaaact catatactcc atcagtgaag aatatgacat caattcatca 180
gatcaatttc atcaagtaaa agaactaata acgcaatatg aggacgtgag aaatgaaagt 240
tcatttcttc atgggttagcc tgcgtccttt caggcatgct cagggtctcca gcaaattctt 300
cagacgatta tgtgcatcta gagacctgac cctgcagaag agattagttc cttttcttca 360
ccatccacat ctg 373

<210> 3107
 <211> 424
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-H10

<400> 3107

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 cgctggtgtg atgtacctct gccaatcat agagcaaagt ggtgggaagc tccctgaacg 120
 cctggaaggc attaaacat cagcaaagcg atttgaaaca attggcatac aggggttgca 180
 actagccata gaaacaggga attttagtga tttcagcaat gctgattcca ctgacaagat 240
 aagcagggcc aactcgttga agtctgcca ctaatttttt tcgggggttg tgagaaatgt 300
 atccagattc gttacttagt ggaacattta aagggaaatc cttgctggat aaaatgtaaa 360
 gagtcccagc ctttttggtg attgccttca ggaaattccg gttgggttaa tttgaaaatg 420
 tgtg 424

<210> 3108
 <211> 368
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-H12

<400> 3108

gggtcgacgg gtcacatggt cgttccattc cccgagccct cattctctcc ctgcgggcag 60
 gtgatgagtc gtcagatga atcccctggc cctggctcct aaattgatat cctcccaaac 120
 actcaactct ctctaatagg attggatttg gtagaaagat gatttgagtg gaaagcaact 180
 cggggaaggc tagagatcaa gatttatgtg gtaggaatgg aatatcttaa cctcaacaca 240
 agtgtaggtg gttccctctc agaaaatgta tggtggaagt gtaggcattg tctgatggct 300
 ctctccatga ataaagagtg ggtggagggg tatatatagc ctccacacaa aatctaaccg 360
 ttacacac 368

<210> 3109
 <211> 361
 <212> DNA

agatctacat cttcaaggtg ctgaagcagg ttcaccccca catcggcac tctccaagg 180
ccatgtccat catgaactcc ttcacaaacg acatcttoga gaagctcgcc ggcgaggccg 240
ccaagctggc gcggtacaac aagaagccca ccatcacgtc ccgggagatc cagacctccg 300
tccgcctcgt cctccccggc gagctcgcca agcacgcctg ctccg 345

<210> 3112
<211> 371
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-024-Q1-E1-H9

<400> 3112

ccgggccgac gggaggtgaa agctagcaaa agactgggaa gcggccaact gagagagcga 60
caacagtcgt aatcatgcat taaaattaat tcacaccaag tacaagcatg agtaggatat 120
aatccaccat caacataaat atcgtgaagg ctgcattgat ttgattcaac tacatgcgtg 180
aacatgtgcc aagtcgagtc actcaattca tttaaaggag gataccatcc catcatatca 240
catcataatc attctaatag catgttggca cgcaaggtaa accattataa ctcatagcta 300
ataaagcatg acacaagtaa ctataatctc taaatgtcat tgcaaatatg tttacttcat 360
aatagctgac t 371

<210> 3113
<211> 364
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-025-Q1-E1-A1

<400> 3113

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tgagagcatg aagaacctca atgccagggc ctacatgcta gcaaagagcg tcgtggatcc 120
agggcatgca gcagcacagc aggetgctcg gtgagaccaa cagatgatct gcagctttga 180
ggcggtaaaa attacttttg gaactttgtt gttaggcagt gacttcgttg ctagtatttg 240
aatcatattg ctacagctta tgctgatgtt ttaaagtctt tgtactcctt ttactcaagt 300
ttatogtcct atgaattaat actgcaaaag acgtttaacg tanaaaaaaaa gaaaaggaga 360

ggtg

364

<210> 3114
<211> 387
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-A10

<400> 3114

gggtccacgg gatcgagtca aagtgccacc aaatcgagct ttctccagtg cagccacatt 60
tgcctttatg ggagggcccta gctaggtcta ttgtcatgcc tctcgccggt gcctccaact 120
aggggaaggtt atggggcgcgc gctaccctga tcaggtaggc ggacataagc cttgtgagcc 180
cgagtttgggt tatgtgcaca tgtccctttt tgggaccggt tttgccacga tgggtggtcgt 240
aggtgacttt ggtaggcacg gggccaccca tgacttagcc caaaggggag ttggtcggag 300
tggccgggag agtgtcatgg cagtaggtca gttttgtcgg aacgccgttg gtccaaccga 360
atgggagtg c aaggccatgg ggttcgt 387

<210> 3115
<211> 382
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-A12

<400> 3115

cgggtccacg acagcatgcc taatgcacct acaccctgc gctgggcaaa gtggtccagc 60
cggatttgtg accaggcatg agcagagaaa gagagtgtgt agccgcctat gtccctgctga 120
catccagaga gcatcacaca ctgaagtaca cgcaacctac taaagcaagc actgatgctc 180
ctgcttacat atatgctgta atgattttgt tgtaccatct tcaacatcat gcgctcctac 240
gtgtatccgc gagtgggtgt gagagaacta gtgcgtgcgt tcatcacttc gcatcgtgag 300
agtagaatat acgatgccca atgaatgttc accacaatac taatactata agtgtgtgac 360
atgtgagcta acataaaagg ta 382

<210> 3116
<211> 347

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-A3

 <400> 3116

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 cttggccgtg ctgaagatga agagcattcc agtgactttg agccggaaga aaatggcgat 120
 ggtgctgagg atgaggagat tgaggatgat gatgctgagg atggtgagga ttctgtcaag 180
 ccgcaatcct catcgaagag gaagaggtct ggtggggagg atgaagatga tgatgacggg 240
 gatgatgatg gtgatgatga tgagaagcct ccatcaaagc gatagtcaat ttgttcttgc 300
 tgatctggta tcttttctgc ttgggccaag aaggaaaata atcctct 347

<210> 3117
 <211> 349
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-A9

 <400> 3117

 gtctgcagg tcatgggaga taaattacag aattacgact tgatcatagg cattgttgta 60
 tcgcgaacgt gaatcgataa actcacatga atgctctgtg ttcattgcga tcaggcttat 120
 caaagacttc gaaacgagtt gtcaaagatg aggcaagcag tgttgatccc aacactgcta 180
 aatttctgaa cgagaagaaa gcagtcgctg atcaaagaag tgaactcttg tgttgctctg 240
 aaaaaaacia catgcacctg aaaataatcg agttgatctt tttgatgccc caagtggatga 300
 agatgccttt ggtgaagaaa atttcatggt agcatcacct atgtcaaac 349

<210> 3118
 <211> 367
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-B1

 <400> 3118

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 aagcagtacg ccgaggagta cgatgcccag gacaaggagt tggttcagct taagcgtgag 120

gcccggatga aggggtgggtt ctatgtcagt cctgaggcta agctgctgtt tgttgtcaga 180
atcagaggta tcaatgccat gcacccaaag accaagaaga tcttgacagt gttgcgtttg 240
agacagatat tcaatggagt gttcctgaag gttaacaagg ccaccatcaa catgctccgc 300
agggtcgagc catatgttgc atatgggtac ccgaacctga agagtgtgag ggagttgatc 360
tacaaaa 367

<210> 3119
<211> 274
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-B11

<400> 3119

cactaccctt cgggtccactc gatctctgct gggttgcgtt tgatgtaagg agcagtctcc 60
gcaatgtatc attccatacg gatgccgttt gaaatacctt ttccgccact gacatcagat 120
aagcattctc acagcagttt gcactgcgcc tttgtgtagt aggttagtcc gataagtaat 180
agagaactgt aggagaacac ccattacgca tccagcacag ataattattat attaattagat 240
aatctcgtgt tatagatact gtcgtgtcat tgtc 274

<210> 3120
<211> 405
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-B12

<400> 3120

gtccacgggt ttaaatacagg catccccaca cgggtcacct cctggaaaga gagcggccgg 60
acatgggggtg attcggagga gctgaccgga ctccaagcct acatccaaaa gctagtggac 120
aagaagctca agcttgtcaa catagtccag gtcattgtca tccgcgggat tctcccgctgc 180
caacaacagg gcttgaacat gtgggagttc gatccggcgc agcaccagac tttgagcagg 240
ctcttcgaca ctacgtatga agatgtctgg aaggtgttgt ttaagggcgc caaggctccc 300
gcatccgcta ccgaagatca cggattcagc tgcagcgtc cggctgttga ggtgagtgat 360
tttgtccttt acgggacgct tgttttccat agtttgactc tatgc 405

<210> 3121
 <211> 341
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-B2

 <400> 3121

acgggtgtat gataacttga ttagggatgt tgcaaccatt aattgctcca aattctcctg 60
 gccaaagtgtg ttacaggcga gacctcgctg acttttggaa acctgtatgt ctgacaagtg 120
 tctatacttg ctttgttaca tgtgtagaat gcattctttg cactctcaat aactcgacga 180
 tttgatctga tcaagtgacc atgattgtag tgctcaaccc atgattctat cttgtaggta 240
 tcattaccac acaacttcat gtccataaaa cttatagaac ttctcaacag cctgtaatcc 300
 ttcaaatatc atgcctaaat taggcttcaa attctcttca c 341

<210> 3122
 <211> 388
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-B3

 <400> 3122

gggccgacgg gagatccaaa agggcatggc tgcagttgaa ttcgaaaaga aggcacatgc 60
 tgataacctt ttacaaagta aagcaatgga gaaaaatatg attgccgtgg ctagtgagat 120
 tgagaggctt cggggtgggc ttgtaaatgc tgaaaagcgg gccactgctg tcaccacggc 180
 agcagctgta actaaccctg ggtatgctca accgtacagc agttctgagg caacatatgc 240
 cacaatgtat ggcaatcccg aggcagcata tgcagcatat ggcagtgctg aggcaacata 300
 tgctggaaca tatgccaatt ctgatgctta tagcaccact aatcaggctc agactcgcac 360
 tgatggtaat ccacatcaca tgacccaa 388

<210> 3123
 <211> 395
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-B9

<400> 3123

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tgcgatgatg gtggcggtgc gctgcatact tctcaacgcc agctcaagca gtgggcgcggt 120
gagattagag gagcggcgcc atcgttcgac gcttagaagc cgctaaagtg gtccagcacg 180
cccctcatct ttgatgccga ggaccacct caccgcacag ccgcggtcgg gtgtttgcgg 240
ttggtgggtcc cgccaacgat acgcaacctc aagggtgaaca agatgttggt tgacggcggg 300
gccagcctta acttgatctc gcccgtcgtg atcagaagac tgcaaattct tggaggagac 360
cttgatgaaa cgggcacggt tcgaagggtc aatcc 395

<210> 3124

<211> 379

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-C10

<400> 3124

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atgacagcat ttaccgtcgc tttgctgaaa atgatttcac aggcggcggt agcaggtctg 120
gccgattaaa catggaaata acgtggacag cggctctgcg agtaaagata gatgttctac 180
gcatcacacc caaggagaaa aagacctttg tgaccgttaa ggacgtcaag gagaacagga 240
aggcccgggc ttctgctggc tgcttgagg atcgaaaagg gcggtctcgt cttgctcggt 300
atgccggtga agcaacaggg gaacacatgg ggcgatccgc cagcaagatt ggcctcaaat 360
caattgctgt gaaagtgaa 379

<210> 3125

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-C11

<400> 3125

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gtcttagaca tacatatgct gagttccgga atacctcttg tacatccgcc actgagcatt 120

gcagtgatcg tagaaaatct tttggtttac atacaccatc cgtgaaacct tgtaaataga 180
gaagtggatg gtagagttag tgttcatatt atctataatg tcacttatct gatcaaggca 240
aaactgcgga agttgaaatg tcagaactgg aatcgtcgtt ggtttaactg aagacttaga 300
ccacaactgt cgttgacctc tttaatccat gtggctgccg tatgctaaga attattacac 360
cgtccaagtg cagaagtgca ttccccgagg gtaggaagtt gtatgggtcc aaaacacgtc 420
tgagtgga 428

<210> 3126
<211> 411
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-025-Q1-E1-C12
<400> 3126

cggtctcaac gcagacaacc gggcttacca caaggcctgc ttcaggtgcc accactgcaa 60
gggcaccctc aagctcgcga attacaactc cttcgaagga gtgctctact gcaggcctca 120
ctttgaccag ctcttcaaga ggaccggcag cctggacaag agcttcgaag gcactccaaa 180
ggttgtcaag ccagaaagga atgttgggaa tgagaatgct actaaagtct cgagcgcatt 240
tgctggcacc agagagaaat gttttggatg caccaagacg gtctatccaa ttgagagggg 300
tactgtgaac aacaccatgt accacaagag ctgcttcaaa tgctgccatg gaggggtgcac 360
catcagccct tcgaattaca tcgcgcacga tggaaagctc ttctgcaagc a 411

<210> 3127
<211> 443
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-025-Q1-E1-C3
<400> 3127

cggtctagat atccccgggcc gacgggtttc atataaagtg cattgaatac catgagaagt 60
ttgattcttt atggttggtt tgagatatga agatgggtgat attagagtca tgctagtaga 120
gtagttgtga atttgagaga tacttggtgt aaagtttgtg attcccgtag catgcacgta 180
tgggtgaaccg ttatgtgatg aagttggagc atgatttatt tactgattgt cttccttatg 240

agtggcggtc ggggatgagc gatggtatTT tctaccaat atatccccct aggagcatgc 300
 gcgtagtact tcgtttcgat aactaataaa tttttgcaat aagtatgtga gttctttatg 360
 actaatgttg attccatgga ttatatgcac tctcaacctt tccacattgc tagcctctcc 420
 agtaacggtg caactttcgc cgg 443

<210> 3128
 <211> 406
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-025-Q1-E1-C4

 <400> 3128

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 agcagatccg ggcaaggcac gaagaccgga ttgccgcagg gctaccttct gatgcggttg 120
 atccggagga ggacttggag gaggaggagg agcatgagga gaacgtgggg gacactgggg 180
 ccgtggatct gtaggetgag caataggcga tctcgtatc cctctggtgg gaatcagcga 240
 cgaaggccaa gcgttgtctt ctgcacgagg tggaggcgga gcacgccaca gacgttgaca 300
 agatgctcgc tgatatggat gagaaggagg atccggagcc ctccaacgtg cccaactacn 360
 cggcaccggc atggacgtcg tggacatctc cgctgaaaga acttag 406

<210> 3129
 <211> 400
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-C8

 <400> 3129

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 tgttgccctt ctctcctcc ccgcattcgc cgtctgcggt tcgcaccacc ggacaagctc 120
 acacatcaag acaataaata gagccttgtc tgtttggggc caatcaaacc aaacaacaag 180
 ttcatgtctg atctcgacgt ccaggttcca actgcttttg atccgtttgc tgaggcaaat 240
 gctgaggact ccggcgctgg tgctggatca aagaactatg tgcattgtcg tgtccagcgg 300

cgcaacggaa gaaagagtct gacaactgtt caggggtctga agaaagacta cagctacaac 360
aagattctca aggatctcaa aaaggaattc tgetgtaatg 400

<210> 3130
<211> 413
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-C9

<400> 3130

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gtcgctggg tggacctctg gcgtggcatc ttcttttgcg acgtgctcaa gaaacgcca 120
ctgctccggg atgttccact gccggtgccg gcaaggtcta actgggatcg cctcctcata 180
aatgatgacc ccggtatatt ccgggacgta actatcagcc gaaacaaaga ctcgatcaag 240
tatgttgagt tggaattccg gtcaatagaa gtgctcaacc ccgccaccac ccctgtttcc 300
tacaccgact ggggtggcggg gaagaattcc tcaaggaaat ctcttcatgt catccgcgat 360
ggctggaagt ccacaacatg gagcatggca ataccggtg gtttgcata gcg 413

<210> 3131
<211> 425
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-D10

<400> 3131

gggccacggg ggcagcggag gctcgcgccg cgattttcgg gcacgcggg aaccggttg 60
gaaagcgcgc ggcgacgaag ctgctgcgga agaagctcat cggcgagcat gtcggcagc 120
ggtaccccca cgacatcaag cgcgacgacc ccgaagtcac ggcgcgcgag gagaaagagc 180
gtctcgcgaa gctggaaatg cttaaagctc gtgggaaggg tccgccgaag aagggccagg 240
gaaggcgtgc gatcaagaga aacaaataat tgccttgctt ctgtttaatt ttagtactga 300
tctggcagct atgctgaaat atttgctgcg aaactaccct ctgtattctc tctctaaaaa 360
aatctaccct ttgtattagg tcagtcacgc ttcattttgt cacggatttg gcaatgatgg 420
gtttg 425

<210> 3132
 <211> 398
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-025-Q1-E1-D12

 <400> 3132

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 ggaaggggga aagagggaga gaagcaaccg tgagtactca tccaaagtac tcgcaagcaa 120
 ggagctacac tacatatgca tgggtatatg tgtaaagggg catatcagtg gactgaactg 180
 cagaatgcca gaattaaaag ggggatagct agtcctgtcg aagactacgc ttctgggtcat 240
 ctccatcttg cagcagatag aagagagtag attgaagtcc tccaagtagc atcgcataac 300
 ataatcctac ccggcaatcc cctcctcgtc gccctgttag agagcgatca ccggggtgta 360
 tctggcactt ggaaaggtgt antttattca gtatccag 398

<210> 3133
 <211> 403
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-D2

 <400> 3133

gggccgaccg ggaagaaacc caaggcggag aagcgggctc cggcgaccaa ggaggccggc 60
 ggcgagggga agacgagggg caggaagaag ggcagcaagg ccaagaaggg cgtggagacg 120
 tacaagatct acatcttcaa ggtgctcaag caggtgcacc cggacatcgg catctcctcc 180
 aaggccatgt ccatcatgaa ctcttcatc aacgacatct tcgagaagct cgccggggag 240
 tccgccaagc tcgcccgtca caacaagaag cccaccatca cgtcccggga gatccagacc 300
 tccgtccgcc tcgtcctccc cggcgagctc gccaaagcac cgtctctga gggcaccaag 360
 gccgtcacca agttcaactc atcctaggct agtctgccgt gtc 403

<210> 3134
 <211> 359
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-D3

<400> 3134

ccgggcccgcac ggggatttta cacattgctg ctcgctccta cactaaccca cacgcacggt 60
cgcacccgcac cctcacctca tctcaccaga gagaaggaga gagaagagag agagtccgaa 120
gaagaagacg gcggcgggat gtttctgcgg cggatcctaa gcggcggggg cgggctggcg 180
gccatgcgct ctgcgcgggc ggtgaaggag acgacgggga tcgtgggtct ggacgtggtc 240
tccgaggcgc gggatgtgct catcgggctc tacacgcgca ccctcaagga gatcgaggcc 300
gtccccaagg acgagggcta ccgcaaggcc gtcgagtcct tcacccgcta ccgcctcca 359

<210> 3135

<211> 368

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-E1

<400> 3135

cgggctgacg gggagcgtaa agtagcactg ctggcatcgg gctggaagtt tgggcgagca 60
agccactcca gcgaagaaga aggacccgat tgcttttcca ttttatgttt tagggtcctt 120
tgtgtaaatt agggtccttt gtgtaaattt gaaggactat tctctaactt tagttctctg 180
gcggtcctat ttacactttg tactcactaa tgatgaatga aaggcagttg gtaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagagaaa aaaaaaaaaa agaaaaaaaa 300
gaaaaaaaaa aaaagaaagg aaaagaagaa ggagaaaaaa aaaaaaaaaa ggggccgccc 360
aaaaggtt 368

<210> 3136

<211> 450

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-E11

<400> 3136

gggtccacgg gtcggctcga tcgacttcaa tgctggtagg tggctagccg ctgcgacggt 60
gttaatgtgg cgggggtgct agagctggca aaggtttgat tgtcacatgc gatgtggcgg 120

acctccgaac tcccgaagac cggccttcgg ttttaagccga ccgggggaat ttcgaacatg 180
acaccgatcc agcccaaat gagagtccgc gttggtggcc taaaaatgtt aggatcatca 240
tgtctgcact tgttgagccg ggttgagat gccttagtca accgagatca tcatgtccct 300
ttttacttca caatgcaaaa ttaatattat ttgattcttc atgaacttaa ttttatattg 360
tattacttta ttgtttttga tgtaattta ttttacataa atatatagtt aaactttacg 420
aagtttaact tgagacacaa atcttatata 450

<210> 3137
<211> 418
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-025-Q1-E1-E12
<400> 3137

gggccacggg tacactatat gttcatcacc gggagcatgt aaaatgtttg catcaaattcc 60
ttcattagca gtctgttcat tagacacttc aggetcaaga acaacatgag cttgtatgtg 120
ttgcaccgga aacttgatta gatacatcag attcagtcag ttcagtattg attgggggag 180
ttataaaata agcagaaatt ggtttcattt tctcatagat tccctacata caaccagaaa 240
ttgaacaatt gaattagata gaatcggcga tgtgatgtac ctgctcgttg cgcgtgtac 300
tcttgcaagc tgcgactgtc cgtttgtgca agctcgatgc catgctcgtg ctgccgccgc 360
tgctcccat gcaggttaca cctanggttg gatentcatc ttentgtcct tccgttca 418

<210> 3138
<211> 382
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-025-Q1-E1-E2
<400> 3138

gggccgacgg gacatcgcca caggcctcgg gcacccact acagggcctc gacgtgcgcg 60
cggatccggt ttgccgaggc ggatggttgc ccttcccagg tgcattaatc gcgcgtata 120
aatgcgcgga atacatgggg tcgtgtgggg gcatgggtgt agttaacccc acgccccaac 180

gatcgtcggtt tcggttttcgc cgccgccgcc acgggtataa gtagggggac ggtgcacggc 240
tagaacgcct cgtgtcgtc cccgtctccc atctttctct tcctttgtct cccctgctcc 300
ctcgctaccg ccgtgctgcc acgccgtcta agcgccgctg cagctccccg tcgcgcaatt 360
tctctgcac accatggcct tg 382

<210> 3139
<211> 423
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-025-Q1-E1-E4
<400> 3139

ccgggccgac gggaaaacaa ttgcagcaat ggatctattg gttcctcggg taggtgaact 60
cattggagga agccaaagag aagaacgact tgattacctt gaagctcggc tggatgaatc 120
aaatcttaac aaagatagct attggtggta tttggatttg cggcgatatg gatcagttcc 180
tcatgctggt tttggccttg gatttgaacg gcttgtacag tttgcaaccg gaatagacaa 240
catcagagac gccattccat ttcccagggt tcctggttct ggggagtttt agcacttgaa 300
gagtatccgt gtataatctc taaaagcatt cttgcctgng acttgaagaa aaccttacgt 360
tgatttgcata ttgtaaagag tttacctgac tgatttctaa tctgcangag cgcactgtat 420
cat 423

<210> 3140
<211> 352
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-025-Q1-E1-F1
<400> 3140

ccgggtcgac gggttcttga gagcctacag tagcatgctg tagcatagta catgctgac 60
cgagtgaata gattttgcaa cgagcctggc attctagctc tgcttccatg attttttttg 120
tgaaatcaga ctgagtttgc gtgcacaggg gaataatttg ctgtcatcgc ttctgatttg 180
atgataatca agcctgcaag aggatgacca gttttaatgg ctgactattg ttgggtgggc 240
catatgtatg ttgctttctt gtatatctga tgggtggcatt tttctcgacg atatctgatg 300

gtggctgtat ctagtgtgc aagtcaaatac atatattcat atgtaatggg ca

352

<210> 3141

<211> 441

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-F11

<400> 3141

gggccacggg atacaaataa gatatttgg ataatagat ctgcgagaa cagagataa 60
aataaataac aataaattgc agtaagatat ttttgtgttt ttggaaatat agatctaaaa 120
ataaaagcaa ataaaaatag atcggaagg caaatataat aaagaagaga ccagggccca 180
tagattttac tagtggattt ctctcgagaa aaatagcata cgatgggtaa acaattactg 240
ttgggcaatt gatagaactt caaataatca tgataatata caggcaatga tcattatata 300
ggcatcacgt ccaagattag tagaccgact cctgcctgca tctactacta ttactccaca 360
catcgaccgc tatccagcat gcatctagtg tattaagtgc atggagaaac agagtaatgc 420
aataagaacg atgacatgat g 441

<210> 3142

<211> 329

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-F12

<400> 3142

cggggtgagt gtagtgaggt aggtgtgtgc ctgcctgcct gctggggctg ccagcgttta 60
ggtgcgtgtg tgtgtgttgt agtagatgag atgatatgag atgagatgag acgagacggg 120
acgggaagcc attgcattgc tgtagtgact gatttgtctg taaaaaaga aaataaaatt 180
aaaaaatgga atacacacaa aaaaaactaa cataaaaagg gtaaacaatt aactgttggg 240
caaatgatta aacttcagat tatcatgata atatccacgc aaaagatcat tacacaggaa 300
ccacgtcgaa gattaaaata aacgcccc 329

<210> 3143

<211> 399

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-025-Q1-E1-F9

 <400> 3143

 ggtccacggc gaaagtgtc gattgcaacg ttttctgac atctacaggt ttcgtggaac 60
 agtcacagac aggtatcgcc agattggcaa tgctgtggcc gtacccgttg gccgtgcact 120
 tgggtatgcc ttggccatgg ccaacctgaa caagactgga aatgatcccc tcatggagct 180
 accaccaag tttgcattct ctcatataga acgcactcct tagtcacact ggcaaacct 240
 aacagttgac ctttccacct gggtttaagt ctcgatcatct ccgttcattc gccgctagaa 300
 aagctgggta cctcatggtc gttaatatca ctaggacgcg tgaatatcgt tacggcatgc 360
 gcattttaac ataactcttg attcacttta ttgccatgt 399

<210> 3144
 <211> 448
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-025-Q1-E1-G11

 <400> 3144

 ggtccacggg gaggtttgat ggtacaaaag caagctggag acagtaacat acaaagtgt 60
 ccatcagaag ataaggagct cttttttcgt agtcagcact caagtatgat caatgggtctg 120
 catgggtattt accaagcgta tgggcccggta gtgaggctag caaaaagggtg gatttccgca 180
 catctattct cttcatttat ctgagaggag gcggttgaat tgggtggctgc ctacctattt 240
 ttgaggccgt ttccattcca tgccccctct tcacgggtta ctgggttcct taggttcttg 300
 cggttgctat ctagttttga ctggaccttt tcacccatga ttgtggacat aaataatgac 360
 ttcaacctga aggatgagaa agaaatcaat gaaaacttta tgctgagcag aagatcttat 420
 gaacanaatc ctcatgatat agagcctg 448

<210> 3145
 <211> 391
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-G2

<400> 3145

ccgggcccgcac ggggtatggca aatctggaga caggagaagg tgagatcgag agagagctag 60
 gggttttcccc gaatcgggct gaattgggga ttttgaccag ggaggggatg cacaatttgc 120
 aaaaaaaccc ttcacaatta tcctgacagt gggccatagc ctgagtcagc aagccacgtc 180
 ggccccgtaa cggtctcgaa cagggaagtg acacattcgc tcataaagca aaccaaattg 240
 accaattctc cacattttga gacttggtg accaacgtgc tcattcttgc agagttcagt 300
 gacaaacggt gcgtttatgt ctttcataaa acacattaca atcgggaaat tgaaatatta 360
 tatttcactt gtttcaaaaa actgattaca c 391

<210> 3146

<211> 369

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-G5

<400> 3146

tcgcggggccc acagaaagcg tcacacgtga ataccgagtg tcgtgtagga caaccatcga 60
 ctgcatgtgg ccaaaacatg tatgtatgaa agggttatgt aatgttctaa ataacgaatt 120
 caccgactctg atgtggcacc tgcctaacaa aacggccaac gcacacgggtg gtcacaact 180
 cgtagtgtac tgcaagccac ccgccacccc ccagacgcac acgcccacac acacacaaca 240
 aatccaccgc aactacgatg catgttaaatt tatcccgtgg tgaacatatg ttaccaaagg 300
 agggacgttt taatttaaaa aaacagagat cgttaagacc gtttagtaca tttgattgat 360
 ttccaaggg 369

<210> 3147

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-G8

<400> 3147

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acaggacccc tgtttcgacc gaagcgctcc aacacaagtc catttcctcc gttttgcggt 120
acaccacacc cctcccgatc aataggaccc catttcgacc gtaggaggtc caaggggaagt 180
tcgtttcctc tgttttgtgg tacgccagac cctcctaata gaacatgatc ccgtttcgat 240
tatggtcggt cgaacacaag gccttttctc ctgttctgcg gtacgccagg cctcatttcg 300
atcggttggt ccatccaagc cagttgggtc ccgatgaaca cgacgtattc tgttgccctc 360
cgatgaacat gacgcattct gttgcctccc gatgaacacg acgacaat 408

<210> 3148
<211> 444
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-025-Q1-E1-H1
<400> 3148

ggtctaccat tcccgggccc acggggcccgg aagagaccac ggacatgacg agcagtctca 60
atatggtcgg gacataaaga ttgatataatt ggaccatggt attcggacac cggaagtgtt 120
ccggattgtt tcggataaaa caggagtgcc ggaaggggta ccagaacccc ccggggaagt 180
aatgggcctt agtgggcctt aggggagaga gagagggcag cagccaagag gtggcgcccc 240
ccaaggggag tccgaatagg actaggggag gggggtgagg cccctcttct cctctccctc 300
tccctcacct tccttcttct cctacttga ctaagaaaag ggggagccaa ttcctacttg 360
gagtaagact cccacccttg ggcgcgcccc cctaggaagg acngccttct cctccctctc 420
ttatatacaa tggagggggc accc 444

<210> 3149
<211> 460
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-025-Q1-E1-H10
<400> 3149

ctacgcaacc accaagctgc gcacccgcac ctgcaccgat gggggaagga acccgtcctt 60
cgacgagaag tttcatatac cactcatcga ggggctccgc gagctgagta tcaacgtgtg 120
gaacagcaac acaatcaaca ccgatgactt cattggcagc tgcaggggtc cgctgaacaa 180

ggtgctcaca agtgggtacg atgattcctc atggcccctc cagacacgcc atatgaagtc 240
 tgctggggaa gttaaactta tcatgcactt tgatgtctca gcaatgaaga acacgatggc 300
 aggtaaaact tctggtcagt acgtccttc gccatacggg gcctcctcag ctctgtaccc 360
 agcgccttta gcatatgctg cagcaccccc accgcacaag gcttatccag ctctagcca 420
 cgcacaatat cgtgcctcct ctgcgtactc aactccgcct 460

<210> 3150
 <211> 382
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-H12

<400> 3150

ggtccatcaa atatctttca tgggtatgat ggaaaggaaa attgtggcaa agtgttagaa 60
 gaagaattac atagaattct tggcataaaa tatttgaatg atgagcatga ttgcaatgtt 120
 gttagtatga attccttgaa tatccatgat gctaatagata tgcaaagcca caagcttggg 180
 gaagctatgt ttgatgaaga tgatattttt tctcccccaa gttttgatga gaatatttat 240
 tatgatgaaa gcatgtctcc tatttatgat gattattgtg agtaaagaat aatgataacc 300
 atgaaacttg ttatcttgat cttaattttc aatcacatga tagttatttt gttgagtttg 360
 ctcccactac taatgatgag aa 382

<210> 3151
 <211> 363
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-H3

<400> 3151

gggccgacgg ggagtcgacc aagctcgccc gctacaacaa gaagcccacc atcacctccc 60
 gggagatcca gacctcgtc cgctcgtcc tccccgggga gctcgccaag cagccgtct 120
 ccgagggcac caaggccgtc accaagttca cctcctccta gactgaagat gcgccgcttg 180
 ttgtgccaga tgtggctgtc tgatgtatct ctgctgttga ctctgcttac ctgcaagtag 240
 aagtagtggg agtagttcgt gtggtagaag attgccaacg ctttgttggc ttcttggttg 300

tgagaactga acgtgttgct tttgcaaaat gaaatctatc tagaaaatgt tgcgggttg 360
gta 363

<210> 3152
<211> 389
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-H4

<400> 3152

atattaaagt tatgctagtt gagtagttgt taatttgaga aatacttggtg ttaaagtttg 60
tgattcccggt agcatgcacg tatggtgaac cgttatgtga tgaagtcgga gcatgattta 120
ttttttgatt gtgttcctta tgagtggcgg tcggggacga gctatgggtct tttcctacca 180
atctatcccc ctaggagcat gcgcgtaata ctttgctttg ataactttta gatttttgca 240
ataagtatat gagttcttta tgactaatgt tgagtccatg gattatacgc acttttcttc 300
cttcaccat tgctagcctc tctaataccg cgcacctttc gccggtatca tacaaccacc 360
atataacttc ctcaaacag gcaacaata 389

<210> 3153
<211> 437
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-025-Q1-E1-H6

<400> 3153

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cggcgagtgc gagttctgct taccattggc aggggaagga agggaatggc ggcgtgtgta 120
gacagttttt tctgctgaat cagcgctaag tctaggtgat atctgtcccc gcagcttcgc 180
ctttgcagat tttgttcag ccatgtagct gggcacagct ggagagtttt tggagccgtt 240
ctctggatat tctggcttcg ttgagaacga agacctctg ttaccacctt taaggctttc 300
ggcggagaga ggttcttctc tggatctctg ctccgcatca ttcaccaaag cattttcttc 360
attgtcaatg tcttgcanng gcataacttc agctgctgta gcaacaacgg tcggctcatc 420

aagtttttct tcacttg

437

<210> 3154
<211> 417
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-025-Q1-E1-H8

<400> 3154

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gtgaaggtag caccagtgcc atcctccttg gcggacacct tcttagtcgc aggtggagct 120
gccatcgcc tcttgcaact gccggtggag ctogatggcg cgtcctcgac ggtagcgag 180
cactccgaag aggtgcgctt gccggagtgg gcatcagagc tcttgccgga cttgggtcttc 240
ttcttcccc cgaggagcttc agcggcaagt gtcttctgt ctgctgcagc tgctgcttcc 300
cggtagatct tgcggcaca nataagagca tccttcttgt cgccagggac aaagatgaca 360
cttattgggc ctggcatttt cagtacgtgg tacgcatagt gagaaggctg catgaac 417

<210> 3155
<211> 400
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-025-Q1-E1-H9

<400> 3155

ggtcacggg gctcaaatac ccgcagcacg agaatttcat ggaatgagca gtcagttagt 60
caaggcaatg ccgagtctta gttttacaaa agtccaggaa gacaattgta cttcgtcaac 120
atgtgccatt tgcttgaag actacagtgt tggtgaaaag ataagggtgc tgccttgctg 180
tcacaagttc catgctgctt gcgtggacct gtgggtcaca tcatggagga cattctgccc 240
tgtatgcaag cgagatgcaa atgctggaat gtcaaatttc cctccatcag agtctacccc 300
tttgctttct tctgctattc ccttgccagc tgaatcgaca gctttgtctt cttttcgctc 360
aatggtagca gcatctctc caacgacaat aagccggcat 400

<210> 3156
<211> 413

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-A3
 <400> 3156
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 atttgtttga aatatccctt tttgatgatg cttgctatgc ttgtggctaa gatgccaata 120
 ggaattattc ttatggagat gaacttgcta tagttcctta tgttaaacad gaaattgttg 180
 ctattgcacc cacgcatgat agtcctatta tctttttgaa ttctccaaac tacactatat 240
 cggagaagtt tgcgcttagt aaggattata ttgatgggtt gccttttacc attgcacatg 300
 atgattttga tgaacataat atgcatgtgc ttgctgctcc tacttgcaat tattatgaga 360
 gaggaactac atctccgcct ctttatgttt caaacacgat gaaattgcaa gaa 413

<210> 3157
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-A5
 <400> 3157
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 gaacaggaaa gactgctact ttctgttctg gaatcctcca acagcttgac tatggtttgg 120
 ttgagtgcc a ggccttggtc cttgctccca cccgtgagct tgcacagcaa attgagaagg 180
 tcatgctgac acttggtgac tacttgggtg tgaagggtca tgctgtgtt ggaggaactt 240
 cagttcgtga ggaccaaagg attcttgcaa gtggagtga tgcgttggtt ggtacgcctg 300
 ggcgtgtgtt tgacatgctc cgtaggcagt ctctgcgcc tgacaacatc aagatgtttg 360
 tcctcgatga agctgatgag atgctttccc gtggtttcaa ggatcagatt tatgacatct 420
 tc 422

<210> 3158
 <211> 378
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-A9

<400> 3158
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ctatgccagc tagccctgtt cgggtgcatgt acgggcagga gcaatttaac caaaaactga 120
aaagaaaagg gtcgcgctaa ctgccacaca tgtggcagaa agggagacgc accacacgtc 180
tctaattgtaa acagattgcc acgtcatcgc atgcatacat gtaggaatat ttttggattt 240
tcagttttta aattgtttta tctcttaaac gaaaaatccg actgaaaatc cgttttcacc 300
attaaatccc tcacgatgag atcttcgaaa ctagatccca tgttgatatg ttttgatgaa 360
atTTTTTTTT ggattaaa 378

<210> 3159
<211> 355
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-026-Q1-E1-B1

<400> 3159
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tggtgtttaa atctaggtgc ttttatgctg aggtatcatt ttagtttctg actgcatgtg 120
gtaacaacct actagctgta tttagctcca tttgatatgt ttgttttaga actttgttga 180
agcaaggtct tgggtggcact gtgtcagaac gcagcanaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaagaaaa aaaacaaat gaacaaaatt aaaaaaaaaa 300
ggaaaaaaaa ccaaattaag ccagctaaga atgaaagaaa aaaaaacggg ccccc 355

<210> 3160
<211> 391
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-026-Q1-E1-B4

<400> 3160
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gcggggccaa ggatgccttc atcgcccatg gcaagcctct ggtcattgcg aagatccggg 120

attatgtcgc cgccatggcg aatggtggcc ccgccaagga cgagatagat tctaagaaga 180
 tttccaccaa ggccgccccg gcggccggtg gcgcagctgt tgctcctgct ccttcagtga 240
 aggtgacagc agcgccagtg caggcgccag cagctaagga gaagaaggcg aatggcaagg 300
 ataaggaagg attcaagact atcgagatga cagagaagtt caactgccgc tccaaggaca 360
 tctatgagat cttgatggat gagaacaagt g 391

<210> 3161
 <211> 427
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-B7
 <400> 3161

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 cgctgctgcc gcoggagcca ccagccagga gctctggccc ttcgtctccc ggtaccgtaa 120
 atcctgctgc aagattcgcc tccatgcctc cagcgatggc ttcctcatcg tctcgcgggg 180
 agaccggttc tacatctgca acccgaccac ccgcatgcac gctcacttgc catttctctg 240
 ccctctcttg ccgcgtcct cctgcatcaa tgacatctac attcacggcc tctaccatca 300
 catatcaacc ggcaaataca ggctgctctt gtccaacatt cacaagaaag aagccacatt 360
 gtacgtcctc accctagaaa gagccaacga gttgaggagc attcaaactg tcatgccaac 420
 actgcct 427

<210> 3162
 <211> 416
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-C2
 <400> 3162

attatcgggc cgacggcttc tgcacccttg aaactagtac tcgggtgttc gtgaagaccc 60
 aaaaattctt tatccaaagt tttggtcctt taaggaggtg tttggcgag tgaacaaggc 120
 aatcggacta ttcggcttta taactctcac ttaccatag aagtctacaa ttttaaattt 180
 cggcgaagcc catagtattc ggaaagccaa actaggcatt atacacacct aaatcgaacg 240

aagcccattc ctcgccttaa gcggaaaaaa tctttaggga ttttggtacc tcgcgaacaa 300
cgaccaactc tcgccgcac c atgacgggtca gttttcggtt ttctctactg aggtgctcgt 360
ccggaagaac caggacacaa tcgcagtagt tctccctgcg ctaccttagc cgatat 416

<210> 3163
<211> 398
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-C4

<400> 3163

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tgatattcat aacattcatc tccatcatca taatcttaac agcaatcgcc cacatgacag 120
tccttgacat cttcgtctgc atcctcgctt tcatgccaac tggatggggc ttgcttctga 180
ttgccaagc gatcaagcct gtggtcgaga tggtcgggct gtgggggtct gtgaaggctc 240
tcgcccggtg ctacgagatt ctcaggggct tcctgctgtt cagcccatc gcgtttctcg 300
cgtggttccc cttcgtgtcc gagttccaga ccaggatgct cttcaaccag gcgttcagca 360
gaggcctgca gatctcccgt atcctcggcg gccacaag 398

<210> 3164
<211> 393
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-C6

<400> 3164

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ggtgtgacg aacagcaacg gcgagctgcg gagagaggtg gcgacctgca acccatggcg 120
atggcagctg ccgcagggtg cgcaagcttt gtgcggcaag gccgcggggt tggggcggtt 180
ggctgagcgc ggtgactcgt tgtgggcaga ggcagatgt gcggaaggac agagaggaaa 240
tcatgcagct acttttgcct aaatccaacg gctgctaggc gaccggccga aagttggggc 300
ggtgcgcgg cgcttagcag tggccttgtt gttttattgg atgcttgcct cttcacctg 360
ctggatgaac tcgcctacat ttttttgacc tgg 393

<210> 3165
 <211> 357
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-026-Q1-E1-C8

 <400> 3165

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 tcaaccgagt accgcgtatg attattggtt cttttcttat gttaatttga ttgtgtagtg 120
 ctcttctgtc tttcttggtg ggtgctgttg ttgaggaaca gaaaactcat ggaaggggtg 180
 ttgttggtga gatagcttgg tataacctct ggcacaattg ctgtgtgcaa gcaacgccct 240
 gttgcgttct actggtagtg gtgtgtgttg tctggtgtcc attgtctaac tatcatgtcc 300
 aaatctaata taatttgaag ttgcttgtgt ctgaaaaaaaa aaagagcaag agaaaag 357

<210> 3166
 <211> 414
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-026-Q1-E1-D1

 <400> 3166

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 cttctcctcg ctctcgtgat tgaagctgta aacaatggag cagatatctt cactgaagac 120
 cagcaagaaa ttatcaagca atttggcaga atcaaatccg agactgttcc tgagaacaag 180
 gatgcagggt ctgatgacga tgatgacgat gatgaagatg aggatgatga aactggtgat 240
 gctgatgatg atgatgccga tgctggagag gacttctcgg gtgaagaagg cgaggacgat 300
 gacgaggatg atgacctga ggcgaacggc gatgatgctg gcgcggggag cgatgatgat 360
 gatggtgacg acgacgatga tgatggtgaa gacggcgagg atgacgatga tgat 414

<210> 3167
 <211> 357
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-026-Q1-E1-D10

<400> 3167

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ttggcccagg cgtctatgac atccactccg ccacgatacc ctccacggat gacattgccg 120
agcgcgtcaa taagaggctc gcagtccacg acatcaacat cctgtgggtg atgcctgaca 180
tgggtctcaa gacgcccacg tacagcgcag tgaagcccg tctgaccaac atggttgccg 240
cggacaagct catccgtact cagctcgcca gcacactgtg aggagccacg ggaatcgagc 300
aacttgatac tactgcataa tgttttgtgg ggacagagtg ccacatgatc cacattt 357

<210> 3168

<211> 121

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-D12

<400> 3168

aattcgcggg ccgacggggg aaggaactcc atgatgtgtg ttctggtcgt cgacctccag 60
gacaatgtca cggatcactc gtgcgtgcat cattcatcaa agagttgtcc acatatcttc 120
a 121

<210> 3169

<211> 391

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-D4

<400> 3169

gacggcgcaa acgagtggag ttgatccctt ggtgcttgcc caacacagcc aagaggcaca 60
accagtggaa aggcctgtat gggaggttgg actgggaggg caacttcccc acatccgtga 120
cagatcccca gccaatgggc aaggtcggca tgtgcttcca cctgatcag gacaggatca 180
tcaactgttcg tgaatgcgcc cgatcccagg gcttccctga tggataccat ttcgctggca 240
acatccagag caagcacagg cagatcggga acgctgtgcc gcctcccctc tcctatgcgc 300
tagggaggaa gctcaagcaa gccatcgacg ccaagcctcg actggcttaa gttcactgca 360
ctgcatgata caagtcccgt ctttttttgg t 391

<210> 3170
 <211> 418
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-026-Q1-E1-D8

 <400> 3170

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 gccgggtgggg ctcgatgggtg cgtcctcgac ggtagtgag cactccgaag aggtgagctt 120
 gccggagtgg gcatcagagc tcttgccgga cttgggtctt ttcttcccc cgaggagctt 180
 agcggcaagt gtccttcatt ctgctacggc tgctgcttcc cggtaaactt tgtcggcaca 240
 gataagagca tccttcttgt cgccagggac agagatgaca cttattgggc ctggcatttt 300
 cagtacgttg tacgcatagt gagaggctgc catgaacttg gcgagtgcgc gacggccaag 360
 gattccattg taaggtaatg gaaagtcggc aacgtcaaac gtgacctctt cagtcctg 418

<210> 3171
 <211> 382
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-026-Q1-E1-E10

 <400> 3171

ggccgacggg gcaactacat aggttgcaca gcaataggat cagaaaaagc gccctggcaa 60
 ctggccgagc tggctcctcc tcctccatg taagacgtgg caggtccgaa tcgctgaaag 120
 ccaaattcca gcttctctta gacagaacaa cgggtgacaa aggttgtagc atcactggcc 180
 tgggtaccga gaatgtaca ggagcttgca agaggttctc aaaagacctc ctccaaatca 240
 tctccggggg caaaggaggc caaaaggga tcacaggcag agcaatctcc tttgtgacag 300
 taagaggatg atacaccaca attgcccaat tggtcgctgt atcttcattg accacaggct 360
 gcataattgt ttcagatata tc 382

<210> 3172
 <211> 370
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E11

<400> 3172

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tgacaaccat gttctgaact atcaatgaga tttgggtgcta agtcagcatc gtgttttatac 120
caatctatca aacaccataa gtttcatgtc gaaaaaaaaa aatcacagaa aaaaaaaaaa 180
aataagtaaa aataaaaaaaaa aaaaaaaaaag agtcaataaa acaataacaa aacaaataaa 240
aaactagtaa atgttataat aaatggataa taaaaaaaca tcgtccacag agaattacat 300
ccgttaatgg ttcctttccc tgggaggcaa tcccctaaag tgcattgtcaa gactgctaaa 360
aggggagtggt 370

<210> 3173

<211> 409

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E2

<400> 3173

ttcacgggcc gacgacgcgg ctgatccaga gatttacgct cccacatag tccttatgag 60
cggcggtgtc atcactctgc aggtccttct cggctcttat ggccttggtc agggctctct 120
cccgggctgt aacctctgaa agcgtgccct ccaagccgtc tagtttcagc ttcaggctctt 180
tgatggagtc gctggcctcg gatagcatgt tggccttgtc agagatagca acctgcgagc 240
ccgccagagt gcggttggtc gcgttcttct cctccgtcag ctccaatacc ctcttcttaa 300
tcttcttctc catcttcagt tgggtttctc atcatagagg atcttactct ggccatggac 360
ttgttgacct tttcctttct cttcttgca caccagtct cctttgggt 409

<210> 3174

<211> 372

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E4

<400> 3174

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ccgtgagctt gtgttggagg tcttctttgc atgcaacagg gatgaagaac tggctgccaa 120
ctatcttttg gatcatggcc atgagtttga ggaacaacaa tagatgttag attggtcttg 180
ctgttgaaag acagaagagt cagtgcgga agcagtagag tttggtgtcg ttcttatatc 240
ttgctgctga atatcactac tacttgccat tagtgcgatg ttgctgactt tcaatttctt 300
gtatcctgga aatgctttct aagtagataa tatcatatgc aaaccttaag aaacaagaac 360
gatggaagaa ca 372

<210> 3175
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-E6

<400> 3175

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gcatgctaag cagagctgct agcagcagga ggcaggagca ggtgggtcccg gcggcgctgg 120
aggaagaaga cgagagattg aagatggatg tccgtcgctg gatgtaaatc caacggctaa 180
cgatgttaga atcatttggt gactaagttg acaacgactt gcattggctt cgaactattg 240
gcccacattt tagcctccaa aaatgtggca cgtattcaac ccattttttc agaatttaca 300
gtcttttttg cggggtagaa tttacagtca atttgatctt tttttttgaa ttacactcca 360
ttagttgggc tgggtgaaca aataatgtag cgtccatgcy ggccaattaa gtttttccaa 420
aaat 424

<210> 3176
<211> 427
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-026-Q1-E1-F1

<400> 3176

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taataaaaat gtgaacaacg actcgaactc gcgtcactat attgcacaga tggttcagct 120
aatcactacg ccaactgaac gacaacgatt gcttccaacg cgaacaatat aagaaccatc 180

gtagccgtgc tatttactac gcagcatcac cttgattttt tttaatgaaa aaagctcgtc 240
aaatttttga aaaaagttca cgaattgaga aggttcaacg gttctgaaaa gagtttatca 300
aatttgaaag aaaagtttac tgtttcgaaa taaattccat caattttgaa aaaagttcac 360
ccaattttga aaaaaaatc atccatttga aaaaagttaa tagattttta canaaaaatca 420
tcagttt 427

<210> 3177
<211> 373
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-F11

<400> 3177

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tttgatcac cactatcgag gaccactca gtggctttgg gttgatcatc ctacagatga 120
attagtgcac cttacaaact catatactcc atcagtgaag aatatgacat caattcatca 180
gatcaatttc atcaagtaaa agaactaata acgcaatatg aggacgtgag aaatgaaagt 240
tcatttcttc atggtttagcc tgcgtccttt caggcatgct cagggtctcca gcaaattctt 300
cagacgatta tgtgcatcta gagacctgac cctgcagaag agattagtgc cttttcttca 360
ccatccacat ctg 373

<210> 3178
<211> 387
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-F12

<400> 3178

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aaaggcgggg gcggtgctg cgcgagaacc gacgtgagct gtgtgcggtg gtgtcataag 120
gagcctgtcc atctccacta gagttatccc aagtttcact tcacatcgtg atgttgtttt 180
accttttttt ttcttgcgt cgtcccgtg cctgctataa cggacagcgc tccctgttgg 240
cgccgcggcc ggcgggggtg gtgccctggc ggcggagggt gtatgtcctc tgccgcgggg 300

tgctcccctg cttgtacctg gatggttggg tactctttcc gtccattgtc accggctaac 360
attgtgataa tatcagtctg ggtaatg 387

<210> 3179
<211> 366
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-F4

<400> 3179

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ttcctggcat gcttggctca atatattgca tgcattggag ttggaagaac tgtccaaagg 120
catggcatgg gcaatttcat ggccaaaaaa ggttccacta taattcttga agcgggtggcc 180
gatcaggaga cttggatttg gcatgcattc tttggaatgc ctggatcttt gaatgacata 240
aatgttatca accggtcacc actgatgaat aagattgcaa accggtgagtt gccacatgtg 300
cagttttag tag caaatggcca tacgtacaat tatggctagt atccagtgga tgggatccaa 360
ccaaaa 366

<210> 3180
<211> 425
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-F7

<400> 3180

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gggcaaggaa gaggagtgc tttcaccata gcaccagatt ctctgccac gcccagcac 120
gaaccacaac cttgaagatg tcgtgccgat gagcgaccgg ctggcggctg cggctacatt 180
ggattgctgg cttgcgcgaa tcaccaaagg agttatggtc tgctgccact gcagagccat 240
gttatttacg tactttacgt cattgcccag agtgtaacgt tctgagacgt gtcccagttt 300
gtgcttcgg attctgttag ggttggcggt ggccaggag tctcggtgag tgggtgtgtat 360
aaagtaagaa agccatttgg accgtgtatg tcggtcccaa ctgttaactt taaaaaagaa 420
ggggg 425

<210> 3181
 <211> 426
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-026-Q1-E1-G10

 <400> 3181

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 agatacagac aaccctagtt gatacatgag ctattcgggc atacaaaaca ggatatttat 120
 ttgaagggtt agattttggc acatacacat ttacttgga cggcaggtag ataccgtata 180
 taggttggtg tagtggaact atgtggaata actttaagg gattggatgc acaagcagta 240
 ttcccgctta gtacaagtga aggctagcaa aagactggga agcgaccagc tagagtgcga 300
 caacagtcac gaacatgcac taaaattaat caacaccaa tgcaagcatg agtaggatat 360
 aatccaccat gaacataaat atcgtgaagg atatgttgat ttgtttcacc tacatgcgtg 420
 aacatg 426

<210> 3182
 <211> 410
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-026-Q1-E1-G11

 <400> 3182

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 gacggaaagg aactttttcc cctcatctag atcgccaggc ccccgcacag ctggatcacc 120
 tgtgtccgtt catcactcga ttggcccttc ttgaccgact gagagcggca agtgaagatg 180
 tgcttgaaga gtccccaatg ggggcggcaa cccaagaagt ttccacaca gcaaacgaaa 240
 gcagcgagat acacaataga attgggagta aagtgatgga gctgcgctcc gaagaagttc 300
 aagaagctct ggaaaaaagg atgaggaggc agagagaatc cacggcgata tgggtggtga 360
 ggaggattca ctaccatca agaggctggg gttecgacttc cttccccgga 410

<210> 3183
 <211> 362

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-G12
 <400> 3183
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 ttccgtttat catgacatgt tcatcattgt catattgctt tgcgatgatca tgtagttgac 120
 atcgtatttg tggcaaaacc accgttcata atttttcata catgtcactc ttgattcatt 180
 gcctatcccc gtataccgcc ggaggcattc atatagagtc ataccttggt ctagtatcga 240
 gttgtaatca ttgagttgta aataaataga agtgtgatga tcatcattca tagagcattg 300
 tccaataaaa aaaagaagaa aggccaaata aaatcaatga aaaataggaa ggcccaaaac 360
 ac 362

<210> 3184
 <211> 371
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-G3
 <400> 3184
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 tgctgtcctg ttttggaac ttgtgttggg ttgttaagcc gtcggtgctt tctttgtcgc 120
 tgttgaactg catcattagt acttcgtgga acaagtatct cgcttaattt gttcaaaaaa 180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagaaaaaaa aaaaaaaaaa 240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagaaaaaaa aaaaaacgaa aagaaaaaaa 300
 aaaaaaaaaa aaaaaagagg gccccctaaa aggtccaaag ttttttgagg gggggcgggg 360
 aagagtaaaa c 371

<210> 3185
 <211> 244
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-026-Q1-E1-G4
 <400> 3185

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catgtactgc taagtgattc aatacacaca ttaccaatcg aagaggagaa tatgggtcgcg 120
gcggcctcta tgagtcatgg tcagcaacgg gagtcagttc actgtccacg gcggtggtac 180
ttctgcgctt ggcgtcagct tccgggaaga agatccgaga ccattggaga cgatgccggc 240
gaat 244

<210> 3186
<211> 392
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-026-Q1-E1-G6
<400> 3186

ggtcagggat tcacgggccca acgggagaga taggcatcgc atcgcggatc ggccattgag 60
agagaaccaa tggagagcgg cggcttgagg cgagatgcat caccagtgct ctcaggagtc 120
ctgatctttt gtcatggcat catggataat gtcctcagca tcttcttcag tcaactccgt 180
gaccagggat atctaaaatg ccttggggac ggatacctat tgcaaaccac atttcacaac 240
attgggtgcaa cccttgctcg agttgatact tttggaatca actatctatg agaaactaca 300
tgacactcag tatggaacgc atatgtgggt aaagtatgct gacaatggtc gctacaatgc 360
atcccaaatg cctgctgaat ggcattggatc gc 392

<210> 3187
<211> 422
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-026-Q1-E1-G8
<400> 3187

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gaacagatct gcacttctgc agttaggaca catgtaccag gctctgaagc tttcctatgc 120
atggaattga ttgccgggag ctcaactcta tctggttatt agtttcgtaa tccaaactac 180
tgctgaaacc attcccctgt tctaactctg tagcatgact agcatctgca ggacttggtc 240
tgcttgatc atttcctgtt tcttgtcttt aggtgccagt gtgtgtgtta catgtatact 300

gtgttaccag cgttctgcct caagaacacg catgcacact agaatacgca tttgttagct 360
gccagcaact tctgggtcaag cttagcgata atttcgttca agtagggatc gacatcgagg 420
aa 422

<210> 3188
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-026-Q1-E1-H10

<400> 3188

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ggcaccagcc gcctcccggt cgtcgggtgcc acgaaccatg aacgccatcc ggctatgaga 240
atttcgcga caccatctg ccagttcgtc agcctgaccc tgcccatctt ctgctcgtt 300
cgccagttct gaaaaaacta atcactttgt agattgtacc aacttttcgt ttttgggtctg 360
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<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
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<400> 3189

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<223> Clone ID: LIB103-026-Q1-E1-H2

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<210> 3191
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 <212> DNA
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<223> Clone ID: LIB103-027-Q1-E1-A10

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 tttaaaggaa cccatggTcc ccccaggatc cacttagata attTggaaag ctcaacaaac 180
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 tggTgatatt agagtcgtgc gagttgagta gttgtgcatt ggagaaatgc atgtgttaac 360
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 <212> DNA
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<223> unsure at all n locations
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cctccaagac tgggaagcat ggtcacgcaa agtgtcactt tgttgccatt gacatcttta 300
atggaaagaa gcttgaggat atcgttcctt catcccacaa ctgtgacgtc ncccatgttg 360
accgccaaga ttatcagctg attgacataa ctgatgatgg atatgtcagc cttctaac 418

<210> 3193
<211> 97
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-A3

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<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-A7

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aagaataaat tctaaccata gcatcatata tactatcaaa atatcaaaca catatcaagt 180
tcacatgatt acttgcaaca tgatttctcc cgtgacctca agaacaaaag taactactca 240
caaatgataa acatgttcat gatcagagga gtattaaata gcataatgga tctgaacata 300
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399

<210> 3195
<211> 457
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-A8

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agaaggatgc atttcgggat gcaattgaca aatgtggact gctggacatt ggatacagag 180
ggaaagactg gacttttgag cggaagtgtg caggctgacc attcacgagg gtgcgtctag 240
ataagatgcc ttgcaacgcc ggagtgatgc aacattttcc ctagtgcagc actagtacac 300
cacacggcag cctcttctca tcacgagccg atcccgttag ccttcgatgc cgacgtgcat 360
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cccgaactgg tggaattcgt gggcactggc cactggg 457

<210> 3196
<211> 430
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-A9

<400> 3196

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gatgccatca aaatctgcac cgcaaaatca tgaggactag aaatgggctaa gtcccttgta 180
agatagaccc ttgtacccaa taaggccagt ggaaacaaca ctcaaaacta tatgtgccaa 240
atgcaaaaga tacttgcccg attcatgcgg atgccgtcgt cagaggctac actgctaagt 300
catgctcaag gcaaatggta tagtccctta tatgacatat acaatcactc aataaggcca 360
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ggatgccttc 430

<210> 3197
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 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
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<400> 3197

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tctgtttcca ttattggagt tcttctcctt tgtcctgcc cgaacagata atccctcggc  180
ttgggatgaa cttgaaccat catgaggcac cattaatttc atcttctcct tagagttcaa  240
agcttcataa acttcattaa gtgtgagagt atcacgactg tatataatat ggtgtctcta  300
acattggtat aagaacttgg cagtgaacac agtaacatta aagcagtatc ttcctcttca  360
tacttaacct ccattgcagc tagatcagat atgatctctt tagattttga aatatgattc  420
anaacattac ctcctt                                     436
  
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<210> 3198
 <211> 448
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-027-Q1-E1-B9

<400> 3198

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gttacagtat aatatgataa ggttttgcat tggtttatac taacctatct caccagttct  180
tgttgagttt gttgtgaatg aagcttttga taaaagaga aaccatgata tgagaggaat  240
taaggagaca taaaagttca agcttgggga tgcccaaggc accccaagat aatattccaa  300
gaagtctcaa gcatctaggc ttggggatgc cccggtaggc atccacctt tcttcttcaa  360
caactatcgg ttagtatcgg ttgagcctaa gttttggctt cttcacatga gttgtgctaa  420
ccttgcaatg tacttttcct tagttttg                                     448
  
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 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-C10

<400> 3199

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 atggttcaag ggacaacat ggatgaacct gcagacgacg ctgattctga cgaagcgctt 180
 gcaccaccga agccaaggaa gctgaagaaa cctaaagctt cgaagccttc ccctacacca 240
 aaggtttcac gggcgaagcc tctggccact gcacctcta aagactgtgc agtctgaaga 300
 tctttcacgc atctccaagc ccgccaaagt gaagatgccc atgcaacca ctagccaagc 360
 actgaccctt gctgttgttc tgcgcaatga gaatgacgcc attgatctgt ccagcgatga 420
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 tgggtgaagt tttcaagttt tgggtaacga ttcgatggac aatggaataa ggagtggaaa 180
 gagcctaata ttggggatgc ccaaggcacc ccaaggtaat attcaaggac aaccaagcaa 240
 ctaagcttgg ggatgcccac gaaggcatcc cctctttcgt cttcgttcat cggtaacttt 300
 acttgagact atatttttat tcaccacatg atatgtgttt tgcttggagc gtcattttct 360
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<210> 3201
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 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-C4

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cgtccgttac ctatctccgt ccggtgcaag ccaccgaagc catgaactga tattttctgta 360
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<210> 3202

<211> 279

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-C8

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atatctgtcg tctcttgtcc ggagactgga agttgaactg ggtttgctgc tgctggcagt 180
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<210> 3203

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-D4

<400> 3203

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Author	Year	Country	Sample Size	Age Range	Gender	Study Type	Findings
Wright, J. & Wright, J.	1990	USA	1,000	18-25	Male	Survey	High levels of stress and anxiety reported.
Smith, J. & Smith, J.	1992	UK	500	26-35	Female	Interview	Stress levels increased with age.
Johnson, R. & Johnson, R.	1995	Canada	2,000	19-30	Male	Survey	Stress levels decreased with age.
Miller, S. & Miller, S.	1998	Australia	1,500	20-40	Female	Survey	Stress levels increased with age.
Lee, K. & Lee, K.	2000	South Korea	1,200	21-30	Male	Survey	Stress levels decreased with age.
Kim, H. & Kim, H.	2002	South Korea	1,000	22-35	Female	Survey	Stress levels increased with age.
Chen, M. & Chen, M.	2005	China	1,800	23-38	Male	Survey	Stress levels decreased with age.
Wang, L. & Wang, L.	2007	China	1,600	24-39	Female	Survey	Stress levels increased with age.
Li, X. & Li, X.	2010	China	1,400	25-40	Male	Survey	Stress levels decreased with age.
Wu, Y. & Wu, Y.	2012	China	1,300	26-41	Female	Survey	Stress levels increased with age.
Zhang, P. & Zhang, P.	2015	China	1,100	27-42	Male	Survey	Stress levels decreased with age.
Qin, D. & Qin, D.	2018	China	1,000	28-43	Female	Survey	Stress levels increased with age.
Wang, Q. & Wang, Q.	2020	China	900	29-44	Male	Survey	Stress levels decreased with age.
Li, Y. & Li, Y.	2022	China	800	30-45	Female	Survey	Stress levels increased with age.

ggtccacggt	cgcacgcaag	aaagcaacga	gcgcgccttc	ctatttaggg	tctacagtgg	60
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<210> 3207
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<212> DNA
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<400> 3207

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<400> 3208

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<400> 3209

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gcagtttggc tccagttttg aaagttatct ttgtttgtct gaaacatctt ggaaagaaca 240
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<212> DNA

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<210> 3214

<211> 375

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ga 182

<210> 3216
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469

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<211> 453

<212> DNA

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gcagcagctg ctccgcaagt gcccagctct gtccaacatc gagcccaggc agatcaagggt 180

ctggttccag aaccgaagggt gccgtgataa gcagcggaag gagtcttcga ggcttcaggc 240

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<210> 3218

<211> 438

<212> DNA

<213> Triticum aestivum

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<400> 3218

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aagtcattctt gcacttgctg ctcggccttg gtcgcttgat gaactagatc gagaagggtg 120

gagtatggtt ggaagtcggc aatccgcttg attgggtggt tgagaccgtt caagaagcgt 180

gccattgttt gtcgctgctc ttccttgaca ttggatgtat catggcaatc tccatttctt 240

ggtagtattc ttccaccgtc ttcgtgcctt gcttgaggag ttgcaacttc ttgaagagat 300

catgggtgca gtgtgtaggc acgaagcgag ctctcatgac atccttcatt tacgtccaag 360

ttgtgattgg tggttcgctt cttgtatgcc gtcgctagat cacttgttcc caccaaatga 420

gggtgtagtc ttgaaact 438

<210> 3219
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 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-H10

<400> 3219

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 taagagccgg atgaacggtg tcaccacgtg tgggattatg cacgtgttac gtctcatcgt 180
 aaaagggggc gcccaaaggg ttccagcttt aagttccctt acaggccact ttcaaccccc 240
 tctaagggtg cccccaattt ccattcccg gccgtccttt ttacacttcc gtacggggaa 300
 aacccgggc tttcccaatt ttaacccct tggggaaaat cccctttcc caaggtgggt 360
 tattcccaa aaggccccc cgttttccc ttccaaaat tttgcccc 409

<210> 3220
 <211> 444
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-H11

<400> 3220

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 tgaggtgggc aggagccggg tgaggtgtc aaaatgtgtg tgttgatgca tgtgttacat 180
 gcaatcgtgc gagggacgga cgaattgaga gagatggtt ttctgttacg gattctttca 240
 cgcacacaca cacacacaca cacacacaca agtaaaatag aagaccgttc tctaattgtat 300
 acacaacata tcggcatctg tctattctca ctcatgcatg atcatttgca cattcacacc 360
 tctctatgtc tctatcacac acacaccgtc tccacatttt ccttccgcca caacacacat 420
 atggacacat acacacattc tctc 444

<210> 3221
 <211> 380
 <212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-027-Q1-E1-H12

<400> 3221

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gctcatgaac gcaatgtccc tcgctgaccg caccggcatg tttgcctgcc cgcacaccgg 120
ggtcgctctc gcggcgctct tcaagcttcg ggaagagggc accatcgggg caaacgaccg 180
cacggtggtc gtcagcacgg cgcacggcct caagttctcc cagtccanga tcgactacca 240
tgattcagag attgaggaca tggcctgcaa gttagccaac ccaacgggtca acgttaaagg 300
cgactttggc gccgtcatgg acgtcctcaa gaagaggctc aaaggtaagc tttgagcatg 360
ccctcctgct gctgctgctg 380

<210> 3222

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-H2

<400> 3222

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aggaagagat acaagccgat ctgaaaaaac tggacgccat ggaacaggat caacaagtta 180
cttctctccc tcaacctgga gccatgcatg tggaaactga taactcgatc cgcacaaatt 240
cgggtcaaagc tcacagtgcc aaattaagct cttacaataa cttgaaaaac agtggttcctt 300
cgtcgacgat atccaagatg catcogtggg tggacaatgc tttaagcatc acatggaagc 360
tatgcaagga gattatggat cacaagcagc atattaataa gctcgaacaa gataatcgca 420
atctgagaga catcattgcc aaaa 444

<210> 3223

<211> 426

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-H5

<400> 3223

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agaccaaagg aaggatgaat caattgaacg cacatttaaa ggagttgcaa ggcacttccg 120

cgaagtgttc tctgaattag tgcaagggtg tcacggatac ctggttatga tgaagaaaaa 180

ggatggtgat gctgccgatg acgacatgga tgaggacgcg cctcgtgaag cagatcctga 240

agggaggata gagaagtata ttggtgtgaa agtcaaagtt tccttcactg gcaagggaga 300

aactcaatcc atgaagcagt tgtctggagg gcagaagaca gtggtggcat taacactgat 360

tttcgctatc caacgatgtg acgcagctcc gttctacctg tttgatgaga ttgatgctgc 420

tctgga 426

<210> 3224

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-027-Q1-E1-H9

<400> 3224

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ctcctccaag gccatgtcca tcatgaactc cttcatcaac gacatctttg agaagctcgc 120

cggcgagtcg gccaaagctc cgaggtacaa caagaagccc accatcacct ctagggagat 180

ccagacctcc gtccgcctcg tctctcccgg cgagctcgcc aagcacgctg tctccgaggg 240

caccaaggcc gtcaccaagt tcacatctc ctagactgac gacgcgccgc ttgttgtagc 300

agatgtagtt ggctgctgtt agtcgctgac tctgcttatg tatctgcaag tagtggtagg 360

agtggctcgc tgtgtgcaa cgcttcgttg gctaattggt tgtcagaact gaagttgcta 420

atctagctga atgtaactgt ttcaaaag 448

<210> 3225

<211> 290

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-A2

<400> 3225

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 ttcctcacgc tgacataaca ttgagacca catgaattag tcaacatcag atacgggcgg 120
 agcctggatt cataaatcgc tgaggcgaca ttacatctat gttcccctag ttatgaggct 180
 cgataatact gttttttttg tatcccctgt gatttgtggc gatgaggtaa ttaacacatt 240
 acaacatttg caccgccaga atgataccaa ggtacctaca cgtgcgccta 290

<210> 3226
 <211> 352
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-A3

<400> 3226

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 attaaccaat tcccatatgc cacataaccg caagcacggc tctcaaaagt ttaaacccta 120
 caggggtatc ccaacttagc ccatgacaaa ctcacgatcc acgaagacaa tcctccatcg 180
 cgggaccctc cgatcagact cggaatcccg gtgcacaaga catttcgaca atggaaaaac 240
 aagtcagca agacctctcg acgtgctaac agcctgatag tacctgcgcg tatctcgtct 300
 caggccacta cagatgagct atgcatccag gtgcaaaaat accccaatta ag 352

<210> 3227
 <211> 406
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-A5

<400> 3227

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 ggggccacgc ttcaagctac tcaaaggagg ctgaccaaac cacagcttga aagctgaagc 120
 actaaccaca acatcaacat ccaacctttt gacatttgca atcccagttt tcacattacc 180
 atcctttccc acctcttttt gcttgtggta ttttcggagt ctgtagctat ttagtacttc 240
 ctatgtcgtg ggctaccaga ggctccttag aggctgcaaa ttttgtcgtg gagtagaagc 300
 aagggaaccg acggagggtg ctcccagttt ctctgagcc tatatgcgtg tattaactga 360

aagccgtgga aggcataact cgtggggaac tctctgagat tttgga

406

<210> 3228

<211> 173

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-A7

<400> 3228

tgaactacga ctgccagcga ctctttgac gtggcgacaca cgagtccaca tattcaccac 60

atcaatacac cactatggat ccgctcccggt ctccctacga gaacgccatc catagcactc 120

acgcttatct tgcgtatctt agagtatcca ctttcacttg tctatgaact gat 173

<210> 3229

<211> 273

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-D11

<400> 3229

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tgtttctccg ttcttagatc tggcccttca ccgtttcttt tataaccgga gatccgtaac 120

tccgattggg cttaattttg gacacgatct ctatccggaa attagctttg ttgcggcgaa 180

agaatggctc caactgcctt acgggggtggc caccacggtc agtggcccgc cagaaccctg 240

gaggtcgccc gctgctcctg gccccctcaa ggc 273

<210> 3230

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-D4

<400> 3230

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tggccatgaa gattatggtc tccttgtag cgagccagcc aggaaatatg ccataatcaa 120

agaacttgat tacctgggta ctttgaaggg tgagacagtt gtctgcagt ttgaagtgag 180

gcttcagaat ggccttgagt gtggaggtgc ttatatcaag tacatccgtc ctcaggctac 240
 tggatggaac gccaaaggact ttgacaatga tactccgtac acaattatgt ttggtcctga 300
 caagtgtggt tcaacgaaca aggttcactt catcctgaag cacaagaacc ctaagactgg 360
 caaatatggt gaacatcaca ttaagtcccc aacctctgtc ccatatgaca aactct 416

<210> 3231
 <211> 345
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-E1

<400> 3231

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 agttctgctt ctgggagagc atgctgtggc actggggcga ggcccccaac aacgcgacga 120
 agaaggcccc gacgcgggag ctgcccggcg cgaccctgtc gagctcgtga gatgctgtgt 180
 agatatactc ccccgcgaaa ttttagcata ccagatgatg atacagcaga cccccccagt 240
 ctctccatt ccatacaata cacaatagcg acagctttgt aaaggtagcc atgcatgctg 300
 ctctaggcc tttcgttccc aacagctata cattttgttt gctgc 345

<210> 3232
 <211> 395
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-E3

<400> 3232

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 tcaagcccaa atgggagggc cccttcataa tcgacgaagt tcttaccggc aaagcgtacc 120
 gtctttggga tgcacggac aatcgcttag agccgaaccc ctggaacgag gccagactcc 180
 gagggtttta tgcctaccgc cgaattcttt gttcgtcccc ttctccccta tagtttccat 240
 tactttttct ctcttttcca cctttatttt tttcgtttta aagctctcat acggctcgac 300
 cgaacaccgc tgacgtagac atctttacat atgtacgtcc attatacccg gggacttctt 360
 tacgagaagc ttgttcacac tattttttcc gagcg 395

<210> 3233
 <211> 406
 <212> DNA
 <213> *Triticum aestivum*

 <223> unsure at all n locations
 <223> Clone ID: LIB103-028-Q1-E1-E4

 <400> 3233

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attgttgaca ccttccgtct tcaggagcaa cctgcttttg acaagaagca gtttatctct 180
cacatgaagc gctacatcaa gaacctctct gccaaagcttg aaggggatga cctagatggt 240
ttcaagaaga atgttgagtc tgccacaaag tatcttctta gcaagctcaa ggaccttcag 300
ttctttgttg gcgagagcat gcatgatgat ggcggcgtgg tgttcgcta ctacaaggan 360
ggagctgctg attcaacttt cctgtacttt gcacatgggc tgaaag 406
  
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<210> 3234
 <211> 436
 <212> DNA
 <213> *Triticum aestivum*

 <223> Clone ID: LIB103-028-Q1-E1-E6

 <400> 3234

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gaagagctcc aagaactcgg ttctggaact tttggaactg tatatcatgg taaatggagg 180
ggctctgatg ttgcaataaa aagaatcaat gacagatggt ttgctgggaa gccatctgag 240
caagaaaaaa tgcggaatga cttctggaat gaagcatcta accttgctga tctgcaccac 300
cccaatgttg tggcctttta tgggtgttgt ctagatgggc ctgggggggtc cattgcaacg 360
gttacagaat acatgggttaa tggctcactt aggacggctt tgctgaagaa ttccaagagc 420
ctggatcgac gcaaac 436
  
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<210> 3235

<211> 403
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-F10

 <400> 3235

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ttggctgttg gattaacatc caacggtcag tgcagctaga ataatttatt gactaagttg  120
gcaaagccct gcgtacgcgt taacttagta ggcccacaag ccagcctcca aatatgggtg  180
gtcccagcta gcagggggaa tcaatttttt tcgcgtaata aggtggcact tccttgcatt  240
cgaagatgtt ttctggtttt tttctttttt ttctttttcg agttagaata aaaagaaaac  300
aatttaacat ctttgatata atctatatat tcatgaaaag gatcataata aagctggcgg  360
gtcccagctg tcagggagag gaaacttttt atttccgcat aat                      403
  
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<210> 3236
 <211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-F3

 <400> 3236

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gaacacttta tgtatgtctt gcatgtgctt atctgtggtg acaatggggg attcatgtga  180
tctacttgat gtatgttttg gtgatcaact tgcgggttct gtgaccttgt gaacttatgc  240
ataggggttg gcacacattt tcttcttgac tcttcggtag aaactttggg ccactctttg  300
aagtactttg tgttggtttg aatagatgaa tctgagattg tgtgatgcat atcgcataat  360
caaaccgcg gataattgtg gtgacattga agtatctaag tgaca                    405
  
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<210> 3237
 <211> 411
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-F4

<400> 3237

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gaagttgaag aagaagaaga cgaagaagaa tgaagaagaa gatgaagaag aagacgaaga 120
cgaagaagat gaagaagaag aataagaaga agaagaagaa gatgaagcag aagaatctga 180
agatgatgaa gaagatgtag tcgaatacga tgacgagtta gctgacgatac aagatgaatc 240
cggttgcgcac aacttgatga cggtgatgct gaggacttcg actcagggtt gcaactggac 300
gattacgctg accaggacca tgacgtttga gacgaatttg atccttcgta cgccgattgg 360
cagcccgacc aatacttcgt tcataacacc tcctctgact cggtcgggtc t 411

<210> 3238

<211> 382

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-G12

<400> 3238

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acaagatcta catcttcaag gtgctcaagc aggtgcaccc cgacgtgggc atctcctcca 180
aggccatgtc catcatgaac tccttcatca acgacatctt cgagaagctc gccggcgagt 240
ccgccaagct ggagaggtac aacaagaagc ccaccatcac gtcccgaggag atccagacct 300
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ccgtcaccaa gttcacctca tc 382

<210> 3239

<211> 395

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-G3

<400> 3239

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atcccatccg aaccaatctg agccttgcat aatcttttct gtatttgctt tgttgaattt 120

gcggttgcat cgtcgtgtcc agttgctggt cttagcgtct agtcttttag agtttcgagt 180
tctgttcaaa ggttgtcacg tcgccgctgc catatatcac caccgcatca tcatcgtcgc 240
tggtgtcata taccaccacc acatattcac cgccaatccg aatccatata cgccaccaca 300
gatecgccgc catcacgcca atccgagttc acctgcaaca tatattcgcc acctgtccgt 360
gttccaccag atttatctcc gccaccagtc cgagt 395

<210> 3240
<211> 418
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-028-Q1-E1-G4
<400> 3240

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gcttctccaa catcgtctgc aagaaggccg acatcgacat gaacaagagg gctggagagc 120
tttccgcgga ggagatggac cgcctgatgg cggtggtgca caaccgcgc cagttcaagg 180
tgccggactg gttcctcaac aggaagaagg attataagga cggcaggttc tcccaggtcg 240
tctccaacgc cgtggacatg aagctcaggg atgaccttga gaggtcaag aagatcagga 300
accatcgtgg tcttcgtcac tactggggcg tgcgcgtccg tggtcagcac acaaagacta 360
ccggcaggag aggaaagact gttggtgtct ccaagaagcg ataagctgct tcacaaag 418

<210> 3241
<211> 445
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-028-Q1-E1-G8
<400> 3241

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ttttggagtc tggcttacta agacgcccta tgcgttctcg aggattgctt gctcgccct 180
acatccattc aatgcttgcc atagcagcag tgtgtgtctg tgtctgtgta ttcattgcgag 240
ctttgtgcg gtttaattct ggtaggtcct tcaagtggga gaggttggat ttcgggtcca 300

catagacatt ggaggatgcc ttattactta gccgcgtgat gttattaagg aaatacctta 360
 caagaaccag aggggtgtgga accagattgc ttttaacctt tccagtttcc atggaactct 420
 gcccatggac atggattatg aaatg 445

<210> 3242
 <211> 388
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-H1
 <400> 3242

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 acatcatgga tgttccttac tctgcattcc ttaatcttca ttctgcatgt ataatagcgg 120
 acacaacaat atagttagga catatatata gtgcaggcaa tatgaacgag atgggggtaga 180
 aattaataaa tcacttacag aacgtagcaa ctgatgatag atttatcgag ctgcgcgaga 240
 ttgaaaagct ggaacaattc actcagttca atttatacat agtaatgttt gaagtgatgc 300
 tcatgtctaa cttccgcata aatatattct ttggcggttt tattttgtat gtaacccttg 360
 taccatttca gcagaccttt catttgtg 388

<210> 3243
 <211> 416
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-028-Q1-E1-H10
 <400> 3243

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 gccgggttac tccaaggatc attaccagaa gcccgagtt aagtttcagg ataatgggcc 120
 agagatgggc tgagaccggg atatagctta aagcctgtag ttacaatcat tgttatagta 180
 gacttgtagt gtaaggcaag tattgttttag agtccaagcc ggacactctt atgagccggc 240
 cggactctaa gggctgctgg gcgtcagcct ccttatataa agggacgacc cggcggcggc 300
 ttggggacaa caatctctcc gagagccggg catagctggt tagctccctg gcgatcgtaa 360
 ccctaataa taacacctcg aactggacgt aagcttttac cttcaaccta aggggg 416

<210> 3244
 <211> 414
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-H2

 <400> 3244

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 tatggatcta tctctctgat caagcaagaa gagatcggca gctccagcga cagcagcagc 180
 cgtttccggg tttttatgaa gggaactatt tggggtcgcg cggaagcaaa attagctagg 240
 gtttattagt gctgctctag ttccgcttgc ttttctttc gcttggttctg ttgtttcttt 300
 aaggatttta ttatcaagggt tgtaaggctg gggatgtgca gctagcttca gattcaagcc 360
 tgccgtctcg cctgcttgta cattgtaaaa cagaaccgct gctctccagt gact 414

<210> 3245
 <211> 138
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-028-Q1-E1-H3

 <400> 3245

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 cactgtgcct ccgtgtcaga tctctctcgt tcgtcttcat ttctgtagga ttcattttat 120
 ccacttattc agtcatgt 138

<210> 3246
 <211> 390
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-028-Q1-E1-H4

 <400> 3246

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 ctcatgtgtg ttgccgacac ggtgggggttc ccaactgcta ccacatgtcc aatataaaat 120

gagtcttttag ctaccgcact cggcttatat ataaaccagc acatgtcatt tagttctttg 180
gcttctataa gacgagtact ttttctgggc catatggctt acgattttgt aagtcgagtg 240
cttgaaatag gtgaccgagt tatacgtata atataagccg agcgcattgg ctgagagaca 300
cagcttatat aatatacgtc gagtgcctttt acctgngcag cccggcttat agtgggtaag 360
cccattactg cactcggctt atatgccaag 390

<210> 3247
<211> 434
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-028-Q1-E1-H6

<400> 3247

cccgggccga cgggtcaact tatcaacca gggaagtgtt ccatcctttt ttccgataat 60
tgcattgcagt cgggtggcgga tgaagtgaat catattctgg agattactca gcagggtttt 120
gagcctaagt atttgggctt accagtcccg gaaggagaa tgcacaaagg gcagtttgag 180
actactcaag aaagactacg gaagaggctt gttgactgga gcgagcagta cgtctcgtca 240
ggcaacaagg agatcttgat aaaggcagtt gcgcaagcaa taccaacctt tgtcatgagt 300
gttttccgcc tccctgcctc ggtgtgtgat gatctcacac agatgatgag acaatattgg 360
tgggggtgga gaaaggcaaa aggaagatgg catggcttag ttgggaaaag atgatgctac 420
caagagtatg ggtg 434

<210> 3248
<211> 416
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-029-Q1-E1-A12

<400> 3248

cgggtccgaga ttcacgggtc cacttcttct cccccagctg cgggtggctgc cgcgctctca 60
acccaagat tgcgcatttc gctgaccgga atccggactt gcggttcctg caagtcaact 120
acaaaaagca caagtccatg tgctacagcc tccatgtcca tgcctccct ttcttcaggt 180

tctacanggg agcccagggc agggtcagca gcttcagctg cacaaatgca accatcaaga 240
 agttcaagga cgccctcgca aagcactcgc cggacaggtg cagcctcggc ccggcgcggg 300
 ggctcgagga ggcggagctc ttggctctgg cggcaaaca ggacctggaa ttcacctaca 360
 acgagaagcc gacgctggtg ccgatcgccg aggctatcca gatggaagct gcctcc 416

<210> 3249

<211> 415

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-A2

<400> 3249

ggtccagaat atcgggtcga cgacgagggg aaccgctcaa gcggacgaga agagctcgaa 60
 gaagagggga acgcttcctc gcatggtaca gccgcaaggg tggaaataag atggcacatg 120
 attgggaaac aaaattgagg ccattcgttg agcagtggag aacagcaagc tcggttcact 180
 ggcacgagga ggcgctcttt gacctagctg cacacgaggg ttacctatgg tgtggtcaca 240
 aatgagattc tgctacatac caagagctga ccctgaggac atggagacgg ctgagacttc 300
 agcttcggag acgcactaca gttcttccgt gactagcgtc atagatcact cgggaatttg 360
 caagcccagt tgacgctgga ggctcaagaa gagactgccg cgatagttaa ccgac 415

<210> 3250

<211> 383

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-A3

<400> 3250

gagggtggt ccaatgttta ttacatatgg accgtcgatt ggagcagcac tttctgctct 60
 caaagctcca aaagttagtt atttttacat atggaccgtc tattggagat gctctgagca 120
 gtagatatat aagattagtc gggcgcacaa caccctttg ttatggacac acatcccttt 180
 tatggcacca ggaatatgcy tctgtatggc ttcccaactt tttttgttca catcaatata 240
 gacacaagtg ctcatatatg cacacataca ctaaccctat caatacacac acgaacaccc 300
 taccctatg agaacctccg agatactgaa ccgacatatc atcttgagat tttatgaagt 360

caccgtacgt gcctcatatt tga

383

<210> 3251

<211> 423

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-B10

<400> 3251

gctccacag aagactatat cgttggaagg gtgcctccac cacatatatc tcctttttgtg 60
gacaacgata aagaggggtca tatacctgac tatgcagtga ccttggaggg atataaatct 120
gctgggtcaaa accaagttat gcctctgcca ggtttaggcg atgaagatct gggcaattcg 180
atagtagagg caatatctga gcataatgaa tttgctaaaa agaagaagga gttggagatg 240
caagagaaga aatacoacga ggagctgaag atggaaattg agggaaactac tttctctaata 300
ttgtcaaata agaaggctga tagcgcagcc gatgttgctg acgaagatga ggcccaggca 360
gctattgacc aagctgagaa ggatgctgat gacattgcca agtctgtcgt ttccaggagg 420
aag 423

<210> 3252

<211> 403

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-B12

<400> 3252

ggggctctag tgattcactt atatccttta tagtacggtg gtggatttgt tttaaagaaa 60
ctattgatct ctaatgcttc actcagatta ttttgagagt cattaatagc atggtaattt 120
gcttaatgtt aatatacttg gtattcaaga tatgtgaaac tttcttttga gtgaattgaa 180
tactaagata agtttgatgc ttgataattg ttttgagata tggaggatgat aatatcaaag 240
tcatgctagt tgggtgatta tgaattcaaa gaatgcttgt gttgaagttt gcaagtctcg 300
tggcatgcat gtatgggttaa agttgtgtaa caaatttgaa acatgaagtg tacctggctt 360
gtgcatectt atgagtggcg gtcggggacg agcgatggtc ttt 403

<210> 3253

<211> 421
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-B4

 <400> 3253

 cgggtcgagg gcgaacggca caaactata cggtgttctc ttgtgcatcg gtatgttact 60
 tgcccagat tgcgctgctg gtatccaata cctagttcaa tctcgttacc ggcaagtctc 120
 ttactcatt ccgtaataca tcatctcgta actaactcat tagttatcat gcttgcaagg 180
 cttatagtga tgtgtattac tgagagggcc cagagatacc tctccgacaa tcggagtgac 240
 aaatcgtaat cttgatgtat gccaaactcaa caagtaccat caaaacacct gtagagcacc 300
 tttatgatca ccagttacg ttgtgacgtt tggtagcaca caaagtgttc ctctgtatt 360
 cggaagttgc ataatctcat agtcataaga acatgtataa gtcatgaaga aagcaacagc 420
 a 421

<210> 3254
 <211> 399
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-029-Q1-E1-B5

 <400> 3254

 ccgggtcgac ggggtgatcc aatggctcat cttgtcaagc gcaaagatac agactttctt 60
 ctcaatgact tgggagatga tgaaaagatg aaggaatctg gatattatagt tcctcaaaat 120
 gtacctgctc acagctggct gaagcgtggg gtagatcctc ctccaaaccg ttatggcata 180
 aaaccaggcc gtcattggga tggagtggac cgcagcaatg gatacgagaa ggacatgtac 240
 aagctaaaga atgacaagca ggccacggag caggaggcct acctttggtc cgtcgcagat 300
 atgtgagcgc cgcagctgtc ccaagaacat gtccgatggc atgctggctg gatcagttgc 360
 tgaggttgcc cactgtgcct gaaaggaaac gaagcgtatg 399

<210> 3255
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-C1

<400> 3255

ggggctcaaa acaattatca agtataaaat tgatcatggc atccaattca cttcctatga 60
tagtttttat tataaccaat ttggatgccc atcattctag gaccaatttt ataaccatag 120
caaatagcat gctgttctaa aagactctca aaataatata tgagagatta acaatttcta 180
caaaatcaag ccaccgccgt gctctaaaaa gtataagtga agtactagag caaaactatc 240
tagctcaaaa gatataagtg aagcacatag agtattctaa taaattccaa acaagtgggt 300
ttctcccaaa aagtgcattgc agaaaggatg actgtggtaa tctaaaaagc aaagactaat 360
atcatacaat acaactccaag ccaaacacat atcatgtgac gaaataaaat atag 414

<210> 3256

<211> 405

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-029-Q1-E1-C10

<400> 3256

gggattcagc ttccttcaac tgctcagtct aaacctcaga ttggtgaggt ggtttctgtt 60
ggaaagggaa gaaccattgg ggatagcaaa gtagaagtcg gcattaaggt tggggctcag 120
gttgtatatt cgaagtatgc tggaatggag gtggagttga atgattccaa ccatctgac 180
ctaaaagagg acgatatcat aggtattctg gagacagagg atgtgaaaga catgaagcct 240
cttagcgacc gtgttcttat caaggtagct gtagctgaag ataaaactgc tgggggcctg 300
ctgctgacta acagtgtcca ggagaagcca tctgttgaa cggtggctgc tgtcggccccg 360
ggctatctgg acgaggaagg caangangac ccgtttccgg tatcc 405

<210> 3257

<211> 383

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-C11

<400> 3257

ggcttcaatt taaatgggtt tccttccacc tttgattttt taatggcccc ttaatttttg 60

gttttaattg ggtttcccaa tttgaattgg tttttccggt ttccattggt tcctttttgg 120
 ttcatcacac cttaacgttt tttcagtaca cagtcattctg aaacattttct tgtatacccg 180
 gtgaacattt tgacatacat aattaacgtt ttctgagaaa tgatattttc tcagtctact 240
 tcttcttata cacactgtat actttgggta tatatctaata acatgttttag cagtgtgaaa 300
 tacacgatta gcatttttta atacattgtc aacaattttt ctagacacat tgaacatttt 360
 ttaaatgctt gactaacatt ttc 383

<210> 3258
 <211> 426
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-C12

<400> 3258

cgggtccacg ggggcccact gaccccgag aaccctattc agcccccgcc cgcattcgacg 60
 ggacgtact ccgccgcgg cgatggagga catcgaggac gtgctgggac cggccggggtt 120
 ttccggcggc ggagctctc ccgggctccg cctaccctc tccactgtcg ccgtcaagcc 180
 caagcgcagg tcgtccaagc tcgtgcagac gcagccccag cccgatgcc ggatcccagg 240
 caccagacg atatacgtca agacattcgg gtgctcacat aaccagagt acagtgaagta 300
 catgtcgggg cagctctcgg cgtttggata tgcaattact gaagagcctg aaggagctga 360
 tttgtggcta attaacacat gcactgtgaa aaatccaagt caatctgcca tgtcaactct 420
 catatc 426

<210> 3259
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-C4

<400> 3259

gggtcgacgg ggagagccag gtgtctcatc cggcaccgag atcaacgaca aacaatcatg 60
 ttgaccctt tgggcagca acagaggaag agatggatgc tgatttgatg aggatagatg 120
 ccatggaaga ggatcatgaa gtcacttccc gcctccaaga tggactcaca atgggagaag 180

tgcagagctc atctattcca aactcgggta tcccttccaa tgtagattt ctttcttatg 240
agattatgaa aaagagtgtc actggttctc ccgcggtat gcagcaccct tgggtgcagg 300
gagctttggc tgttacagga aaactccgca aggaaataat gaacctcaag cagcaagtca 360
acaagcttga ggaggaaaat cgtatcttga agggcatcat cgccaagaac atcacaatca 420
catccccgaa aaga 434

<210> 3260
<211> 442
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-029-Q1-E1-C9

<400> 3260
gggccacggc gacccacgaa gggcacacga ggggtggggga ggcctaccc cctgggcgcg 60
cctccctgcc tegtggccac ctgctgctt ccttgacgtc cactccaagt ctgctggatt 120
gcgtttgttc caaaaatcac tctcccgaag gtttcattcc gtttggattc cgtttgatat 180
tccttttctg cgaaacactg aaataggcaa aaaaacagca atttgactg ggcctttggg 240
tagtaggtta gtcccaaaaa taatatagaa gtgtataata aagccatta aacatccaaa 300
acagataata taatagcatg gaacaatcaa aaattataga tactgtcgtg gaattgtcac 360
gtcagatgtc ctggtgcaag gacttantcg tggagccatc gcaactaaga agcttaaagg 420
ggtttaaacg gacaaaggaa ca 442

<210> 3261
<211> 438
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-D10

<400> 3261
caatttgggg agaagcaatc cagaaattgg aattggaaac aaaacccaag gtgcttaact 60
aaaacctttg gaccttgaaa gtggctcaaa tggcttcact aaaacctttt ggaccgtgaa 120
aattttttgg cccaattgct tcaactaaaat cttttaaagc acggtggtgg atttgtttta 180

aagaaacttg atctctcatg cttcacttag attatcttga gagtcgttaa tagcatggta 240
 atttgcttaa tgttaataata cttggtgttc aagatatgtg aaactttatt ttgagcgtgt 300
 tgactactaa aataagtttg atgcttgata attgttttga gatatggagg taataatatc 360
 aaagtcatgc tagttgagta gttgtgaatt tgagacatac ctgtgttgaa gtttgtaagt 420
 cctgtaacaa gcacgtat 438

<210> 3262
 <211> 397
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-D11

<400> 3262

ggtccacggc gctgtgtgaa gcacacccgt tgcacgaaag cagcgaacgg agcacgatga 60
 gcgtgcgcgc ggggtgacca cgcgcccagt ccttctagca gaggagtaag atgacaaggg 120
 gggggggcgt tggcgggctg ggccaccagg tgagtgccag ctacgttctc actctctctt 180
 tctctgtttt tctttttcga ttgatttcc tctgttctga tttacttttag ccactaatc 240
 gtattaataa attctgtagg ttattatatg gcttgctaaa acatataaaa agccactcac 300
 gaacttccag aattattgga gttacattta gtatataata aatattaata cacagcaaat 360
 aagtattggg ttaattcaaa tggccaaaat aaatgtt 397

<210> 3263
 <211> 395
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-D12

<400> 3263

gccaaacaaac gggtcgacca caaggcctgc ttcaggtgcc accactgcaa gggcaccctc 60
 aagctcgcga attacaactc cttcgaagga gtgctctact gcaggcctca ctttgaccag 120
 ctcgtcaaga ggaccggcag cctggacaag agcttcgaat gcactccaaa ggttgtcaag 180
 ccagaaagga atgttgggaa tgagaatgct actaaagtct cgagcgcat tgcgtggcacc 240
 agagagaaat gttttgatg caccaagacg gtctatccaa ttgagagggt tactgtgaac 300

aacaccatgt accacaagag ctgcttcaaa tgctgccatg gaggggtgcac gatcagccct 360
tcgaattaca tcgcgcacga aggaaagctc ttctg 395

<210> 3264
<211> 432
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-D2

<400> 3264

gggtcgacgg gttggaacag tacgtaagta ccgcatatgg gaaggtatgg tagattcata 60
tggaataact ttgggggttta tggagtttgg atgcacaagc agtagtcttg cttagtagacag 120
gtgaaggcta gaaagagact gggaagcaac caactagaga gcgacaacag tcaagaacat 180
gcattaaaat taattacaac gaggtgcaagc atgagtagga tataatccac catgaacata 240
aatatcatga acgatatgtt aattttgttt ctactgcatg tgtgaacatg tgccaagtcg 300
attggtcgaa tcattcaaat gaggatacca ccctatcata ccatatcaca accattttta 360
tagcatgttg gcacgcaagg taaaccatta taaactccta gctaattaag catggcataa 420
acaactataa tc 432

<210> 3265
<211> 383
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-D4

<400> 3265

tcgccgggat tcagttcccg gtgggacgta tacacaggca actcaagcag aggggtctcgg 60
ctaattggccg tgtgggtgcc actgctgctg tgtactctgc agcaatcctt gagtacctta 120
ctgccgaggt ccttgagctg gccggcaacg ctagcaagga tctcaagggtg aagcgtatca 180
cccctcgcca cctgcagctt gcgatccgtg gagatgagga gctggacacc ctcatcaagg 240
gcaccatcgc tgggtggtggt gtcattccctc acatccacaa gtcactcatc aacaagacct 300
ccaaggagtg aatgaaatgc aataacgggt agttgttgtg tgttgtatct tcgtgatccc 360
ttgttatgtt gtgctatctg tta 383

<210> 3266
 <211> 250
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-E10

<400> 3266

gggtccacgg cgatttgagt agggacattg aggatgatga tgatcaggcc tgaaaagcca 60
 ttctggtatg gtaatgtcaa ttgtattgtc aacatttttt atataccatt acttgtgcaa 120
 gataccatca tgtgaccaat aaacattggg ttaattgcgc tgcttatgtg atggatacgt 180
 gtgtaaactc aagtttgatg ttataaagtg gcatttggtg atgcattcatt ttgctatagt 240
 tatatadaag 250

<210> 3267
 <211> 407
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-029-Q1-E1-E11

<400> 3267

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 tcttttgagc taagtaattt tgctctatgt gcttcactta tatcttttga gcgttataat 120
 tttgctctat gtgcttcact tagatttttt agagcacggt ggtggatttg ttttaagaa 180
 agtattgatc tctcatgctt cacttaaatt attttgagag tcttaatagc atggtaattt 240
 gcttaataat aacatgcttg gtattcaaga tttgtgaaac tttcttttga gtgtgttgaa 300
 tactaagaaa agttggatgc ttgataattg ttttgagatg tggacgtagt aatatcaaag 360
 tcatgttagt anagtaattg tgaatttgag aagtgcttga gttaaaa 407

<210> 3268
 <211> 289
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-E12

<400> 3268

aggatcatcc ggagatcgcg acgagtttag aatctgcttt tactgtaaca ttgcaaaac 60
 gtagaacagg atattgcgga attgaagtct gcaattaagg agcttgattc acaattgatg 120
 ccaccatcag tgcaacaag actattatcg cttgttccaa caattcacta ggaatttaca 180
 cgcttaaata ctctggctga agagatttat aggcgggata gtccaaactg catgaaaatg 240
 ttgctgeagt caattctact ccatccagca ttcataggaa gatgctaāt 289

<210> 3269
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-E4

<400> 3269
 cggtgcgagc gcgctctcctt gaccgtaacc cttgtgtgtt ttggaaatag taaccgacgt 60
 tcatcattca ccttaatccc aaaacccctt ttttgcgtaa aggaatcaat ctggtttctc 120
 catgccgat caaaccttt catacgcaaa gcttggttaa ggaaacgcca ttgacttta 180
 tcatatgctt tttcaaaatc cactttaaaa actacgccat caagtttttt ggagtggatt 240
 tcatggagcg tttcatgcaa gacaacaacc cttccagga tgtttctatc aggcattgaaa 300
 gcagattggg acggctgaac aaccccttcc aggatcgaag tttgtgaagt ttgatttttt 360
 ttaatctaga cgcactatat tgtggaacgg aggcagtggg act 403

<210> 3270
 <211> 463
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-029-Q1-E1-E9
 <400> 3270

gcggtccgta cattcacggg tccacggcgg ctacgggatg gcgctagggg tcgtgcgaga 60
 gtggaagaag agataatgac cgctgtgaag tgtgtattta taggtacagg ggccggcactg 120
 cgttattaca caggtgcccc tggcgattcg catctgagga atacgtggcc atcatgcaga 180
 attttggggg ttgttccacg ttccacgcac acctggattg tcgggtgggc gttcctactt 240

ctccggggttt catgtggagg aatgagcatt gaaaatggac ttaagggttg tctctgtatc 300
 ttcagctgac aaggacgcag agaagacatt cgacagtttc aatataatgc atatgatttg 360
 gagagataga gtttgagata gaaagcacag agagggttaag gtccgatcac attcacttag 420
 ttcanaagat tcaacaagaa gacatagcta taagtgaatg ctg 463

<210> 3271
 <211> 396
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-F10
 <400> 3271

aataatttgg aaatcccaaa ccacaaggga aattgccttg ggtaatgaaa caatcccaaa 60
 tatgatggca tcaagaaggg atataataaa aactttcata tagagtgcac tgaataactaa 120
 gagaagtttg atacttgata attgttttga aatatggaga tgttgaaatt agagtcacgc 180
 aagttgatta gttgtgaatt tgagaaatac ttgtgttcaa gtttgtgatt cccgcagcat 240
 gcacgtatgg tcaaccgtta tgtgatgaag tcggagcatg atttatttat tgattgcttt 300
 ccttatgagt ggcggtcggg gacgagcgat ggtcttttcc taccaatcta tcaccctatg 360
 agcatgcaca tagtactttg tttcgataac taatag 396

<210> 3272
 <211> 384
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-F12
 <400> 3272

taatcccaat ttcaaaccag ttttgggaatt tcaaatttcc ttaaaaaata caattgttaa 60
 gatggctctc caataaacta gttatttttaa ctaaggacaa cttaacaaat cgtaattgga 120
 caggccctat taggtgtagt ttctgtgacg ggaatgagac gatcaaacac ctttttctag 180
 attgcccgt atccaaagt ttatggcaga cgggtccatat tacatttaat attactccac 240
 cgaattctgt catcacgtta tttgggacgt ggcttaacag gatacagcct gacttggcga 300
 tacatatacg tgtacagatt tgtgcaactgc tgttgactgt atcgacctgc atatatgatt 360

tggttttttaa caggatatca cata

384

<210> 3273
<211> 359
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-F3

<400> 3273

cggctcgacgg gagtcactaa ttgacgccgc ctgcagattc cagaagcctg atgaagcccc 60

gacttgttta gtctgctatt tcctctgtag tttgaactca atcgtggaac aaagttattc 120

gcatatattg ttggaaaaaa aaaaaagata aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaagaa aaaaaaaaaa 240

aaaaaaaaaa aaaaataaaa aaaaaaaaaa aataaaaaaa aaataaaaaa aaaaaacaaa 300

aaaaaaaaag gggctaaaaa aaagtccaaa attaaattca gggtagcaga aattaaaaa 359

<210> 3274
<211> 383
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-F4

<400> 3274

cgggtcgagg ggtcctccca atctaaaccc ctaggagcat gcgcgtagtg cttagttttt 60

tatgacttat acatttttgc aataagtata tgagttcttt atgactaatg ttgagtccat 120

ggattatagc cactctcacc cttccatcat tgctagcctc ttcggtacca tgcattgccc 180

tttctcaact tgacagttgg tgcaaacttc tccggtgcat ccaaaccctg tgatacgata 240

cactcttcac acataaacct cttatatct tcctcataac agccatcata cctatctact 300

atggcatttc gataccatt ccaatatata ttgccatgca acttccatcg ttctgttcac 360

catcatgaca cacattgtca ttg 383

<210> 3275
<211> 345
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-F9

<400> 3275

attaaaacca atgggttcaa ccccggtaaa ccttgggcca aaccttaata aaatttaata 60
atctcatatc aagagccaag atatgtaacc tgataagggtt gtggaccaat gggatgacag 120
tgacactgaa aactcctctg gaagtgcatac atatcaagtt gttccttaca agaatgcca 180
aggagaaaac accttacctg tgctgtctaa aaaaaggaa attcattatt agtacatatt 240
ctgtgcaatg tagtacttgc cagaaatgga gagttgtacc atccaaactg aaatatgagc 300
aaatccgaga gaatattata caagttcctt tttcttgcaa atatg 345

<210> 3276

<211> 415

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-G11

<400> 3276

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tagtaatgtt agggatcatgc tagtgataa ttatgaaatt gataaatact tttgttgaag 120
ttggcaagtc ccgtagcatg cacgtatggt aaaagttgtg tgacaaattt gttgcacgag 180
gtgctctttt gattgtcttc cttatgagtg gcagtcgggg acgagcgatg gaactttttc 240
ctaccaatct atccctcttg gggcatgtgt agcagtactt tgcttcgagg gcgaagtaca 300
tttttgcaat aagtatatga gttctttatg actaatgtga gtccatggat atacgcatac 360
tcacccctcc acttgctag cttttcttat taccgcgcac ctctcgcggg tattg 415

<210> 3277

<211> 452

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-G12

<400> 3277

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gttgggaggc aacccaattt tatttttatt ccttggtttt tgctcctgct tagtaataaa 120

taaattatct agcctctgtt ttggttgtgt ttttttgtgt ttaattagt tttgtgccaa 180
 gtagaaccgt tgggaagact tggggaaagt cttgttgaac ttgctgtaaa aacagaaac 240
 tttagcgctc acgagaactg ctgtcatttt tatttggaaa gtgatattta gtttaattctt 300
 tttgaagatg attaatagat aaattcctca cgtccggaaa tttattttat aatttttggg 360
 gttccagatc ttgcgctagc tacaaattac tacactgttc tgtttttgac agattctgtt 420
 ttgtgtgtgt tgtttgcta ttttgatgaa tc 452

<210> 3278
 <211> 376
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-G3

<400> 3278
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 ctogaagagg atcgctagcc atgtccgggc gcggcaaatg aagcaaggga ctgggcaagg 120
 gcggcgccaa gcgccaccgg aagggtgctgc gcgacaacat ccagggcac accaagccgg 180
 cgatccggcg cctggcgcgg agggggcgcg tgaagcgcat ctcggggttc atctacgagg 240
 agaccgcggc cgtgctcaag atcttctctg agaacgtcat ccgcgacgcc gtcacctaca 300
 ctgagcacgc ccgcgcaag accgtcacgc ccatggacgt cgtctacgcy ctcaagcgcc 360
 agggccgtac cctcta 376

<210> 3279
 <211> 385
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-G4

<400> 3279
 gaagaacaca aagccgagaa gcggctgccg gcgggcaaga cggcgtccaa ggaggccggc 60
 ggcgaggcca agaccggggg caggaagaag ggcagcaagg ccaagaagg cgtggagacg 120
 tacaagatct acatcttcaa ggtgctgaag cagggtgcacc ccgacatcgg catctcctcc 180
 aaggccatgt ccatcatgaa ctcttctatc aacgacatct tcgagaagct cgccggcgag 240

tcggccaagc tcgcgaggta caacaagaag cccaccatca cctccaggga gatccagacc 300
 tccgtccgcc tcgtcctccc cggggagctc gccaaacacg ccgtctccga aggcaccaag 360
 gccgtcacca agttcacctc ctctt 385

<210> 3280
 <211> 378
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-G5
 <400> 3280

tgacgggatc cgggacgttg ctcaaaagaa gaaggccatc aagaaatcga gggactctgt 60
 caagaacagg aacaaggagg ctgcgcgttg agaggcggat cgcgtcatcc ccaccttgaa 120
 accgaagcat ctcttctctg gaaaacgagg agttggaaag acccagaggc gataaaccag 180
 tcaatgtgga cgttgctgct tgcaatcact cgatcaggaa ctattggatc actgccattt 240
 ttcgtgctgg gcatcggggg aggccttcagt gtcaatctgg cagctggaga tactactatc 300
 tattgcaatt ttatttttat ctggcattta ctctgtgttc cgctttgttt gttagactac 360
 gttgttggtg aactatat 378

<210> 3281
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-G8
 <400> 3281

gacggggaaa agaagaaatc cagcgagaac gtcaagggtca tctacgcccg cgccaagcag 60
 tacgccgagg agtacgatgc ccaggacaag gagttgggtc agcttaagcg tgaggcccg 120
 atgaaggggtg ggttctatgt cagtcctgag gctaagctgc tgtttgttgt cagaatcaga 180
 ggtatcaatg ccatgcaccc aaagaccaag aagattttgc agctgttgcg tttgagacag 240
 atattcaatg gagtgttcct gaagggttaac aaggccacca tcaacatgct ccgcagggtc 300
 gagccatatg ttgcatatgg gtacccgaac ctgaagagtg tgaggaggtt gatctacaaa 360
 agaggttatg gcaagctcaa caagcaaagg attccctttg ac 402

<210> 3282
 <211> 386
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H1

<400> 3282

gggtcgacgg gagcaaggta gcggaggtgc agatcacgac gctgatcgag ctgctgatgc 60
 ggcacgcggt gaagctggag agcatacctg ccgacgccga cacctcctcg cagaagaacc 120
 tccaggcgaa gcgggtgcag aagtgcgtgg aggcgctgga cgtgctcaag gtgtcgaacg 180
 cgcggtgca gacggtgctg gtgaccacca agtgggagac gttcgacaac agccccccgg 240
 tcaccaccaa gtgggagatc ttcgactgat ttaagcagca gcagggcagc agcagcagag 300
 attttttctt tatacagaag agtgtccatt tcgttcgttt cgtgccgtca gttttggtgt 360
 cttgttcctt gccattatt cgtttc 386

<210> 3283
 <211> 381
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H10

<400> 3283

ctgccttctc tccggcgccg ccgcagccat ggtgaattac tcaacgggtc ccgccaatcc 60
 caccaattcc gccaggcca tgggcccggga cctgcgtgtt catttcaaga aactagggga 120
 aacagcgctt gccctgagga agatgtcgct caacaaggcc aagaggtagc ttgaggatgt 180
 gttggcacac atgcaagcca tccccttccg gaggtactgc cgtggtgttg gacgcacagc 240
 ccagggtgaag aaccgtcagc ccaatggtca gggacgctgg cctgccaaagt ctgctaagtt 300
 cgttctggat cttctaaaga acgctgagag caatgctgag gtgaaaggtc ctgatgttga 360
 tgctctctac atttcacaca t 381

<210> 3284
 <211> 358
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H11

<400> 3284

tctcccgcgc cgccgcagcc atgggtgaagt actcgacgga tcccgcaaatt cccaccaagt 60
ccgccaaggc gatggggccg gacctgcctg ttcatttcaa gaacactacg gaaacagcgc 120
ttgccctgat gaagatgtcg ctcatcaatg ccaagaggta ccttgaggat gtggtggcac 180
acatgcaagc catccccctt cgacgtact gccgtgggtg tggacgcaca gccacgtga 240
agaaccgtca gcctagtggg caccgacact ggctgccaa gtctgctaag ttcgttctgg 300
atcgtctaag gaacgctgac accactgctg aggtgatagg tctgatggt gcagctct 358

<210> 3285

<211> 430

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H12

<400> 3285

ttcatctttt taatatcttt catgggctgc tgactctggt catacaaacg acaaacttgt 60
gtaaaatcta tttcactgtc ctgttgactt gtctgacct gagtgaaatt gtggttctgc 120
gggtgtgcat aattttcttc tggctaagtt ggcacggagc gcgtccaagg acgagacatc 180
tttactctg gggatatatt ttgtgaactc gtaagataag aaagagagtc gcaaaggctg 240
ataaaatcac acacaaagaa cattttttta aactccagga tatttttggg aacacacgat 300
tgcgcgcgga gaaggactat tacatatctt acacgtgggc ataattatac attacatcac 360
tcaggatatg cgtacataat cctgacatgt tatttaaact agtgactcc tccagatcct 420
acatgatgcg 430

<210> 3286

<211> 361

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H2

<400> 3286

tgcgggatg agcttcggcg gcgccagctc cggttgggcc ggtgggaagc ggccgttcga 60

gtacgggagg acgcatgtgg tgaggcccaa gggcgcgcac aaggccacca tcgtctggct 120
ccacggcctc ggcgacaatg gagccagctg gtctcaactg ttggaaaactc ttcccccttc 180
taatataaaa tggatctgcc caactgcacc tacgaggcct gtggcaattt ttggtggatt 240
cccatctact gcatggtttg atgttgctga tctttcagaa gattctcctg atgatgttga 300
ggggctggat tcctcagctg cacatgtagc aaattttattg tctaccgaac ctgcagacat 360
c 361

<210> 3287
<211> 406
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H3

<400> 3287

gggtcgacgc gtgagaaaat ccaacgtagt caacccttg aacttgtcga taacccttag 60
cgacaagtcg agccttatat atggtcacat taccatccgc gtctgtcttc ttcttaaaga 120
ttcaattatt ttctatggct cgccgatcat cgggcaagtc agtcaaagtc catactttgt 180
tttcatacat ggatcctatc tcggattgca tggcttcaag ccatttggtg gaatccgggc 240
ccgccatcgc ttcttcatag ttcgaagggt caccgttgtc caacaacatg atttccagga 300
caggggtgcc gtaccactct agtgcggaac gtgtccttgc ggacctacga agttcagcag 360
taacttgatc cgaagcttca tgatcatcat cattaacttc ctccct 406

<210> 3288
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-029-Q1-E1-H4

<400> 3288

cgggtcgaca gggatattga acacggccaa aacacgaaat gcgccccgat gcaaatcaac 60
ttgcctgaaa cctggcatga cagcaagggt cattacattg aatgtacttg caagctcaca 120
acagacatac gcacgatggt agacaatatc atgataatta atcaagttaa attaattgcaa 180
gaaattacta caaatgcaaa gctatgcaaa gcaaccaaac agcgcatcta gtcacacgga 240

ctcgcttacc agacggttac ctcataacca aatgggtgacc tcaccgggggt cagacctgaa 300
 accaatcact catgaacacc tcgagtgttc aaggttcacc atgaaacaat gcaccacaac 360
 aattactagt ttgcaagatt aattataaaa g 391

<210> 3289
 <211> 325
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-029-Q1-E1-H6
 <400> 3289

tcggtggggg gtgggaaacc aagttcgtcg tcttacgtct ctcgttcccg ctggatgtac 60
 gtcgggcgag agttccccga caaggagata tatttcaatg agtttaggac atcgccctaga 120
 ggtgagtgtc ggaagatgtc cacggaactg aactccagaa tctgtgcgta atcaggttcg 180
 atggacgccg atgcacggcg tccataacct atgggtcgaga ccagtccaag gttcacgtag 240
 cacaagccta gcttgatgtc ggggtcttga gcggctcgag cgttactaag tctgcggctt 300
 ccgtggctgg gttacgtttc ctgtc 325

<210> 3290
 <211> 425
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-A10
 <400> 3290

gggccgaccg ggcaagaagg aaaaaatgaa aaggaccccc cggctcttatt tataaggtga 60
 aaggataagt gacaggcgtg aaaatcgagg agcccaaaag ttggatatgt gacaaagcgg 120
 tcgcctcgat tatcggaggc tcattaatga aggtgaggta tattcaattt ttaataacag 180
 gtgacgtcgt ggcggtttat tacgaacctg gaagatgacg tcatggcgtt ttacaggatt 240
 tatgtgaagg tgtggaagga ggaatttttc tatgtgttga agattgacat gaacaagttc 300
 aatcaatct cgggcctaata gttggagata ttactattaa gtataaaccg gccatgaagg 360
 gccgggttat gtcacaatg agttagtcga gtttgaaacc catgaagaca agaagtatgg 420
 cactt 425

<210> 3291
<211> 164
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-A11

<400> 3291

cgggccgggcc gggctctcag ggtgaaagtg ataacgagat cctaattgta gatttagtaa 60
aattcactta acccgaataa aagagagatc agagtccgag agtataggca aggagtaaaa 120
gatcctaata ccacccaatg gcgaagtggg cccgtaagcc acac 164

<210> 3292
<211> 202
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-A12

<400> 3292

attctgaatt tccttccatg tatgccagcg tacatgtact acgtatgcac tcattttctc 60
ttggatggct tggctaattg ctatggatga aagaatccat tcaaaaatca tccactggga 120
acgtcctgtc gttacccaaa caaatatgtt tgcaacacat ctccctttca ctagatgcct 180
catcagccaa caagtgcaca cc 202

<210> 3293
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-A2

<400> 3293

gggtcgaggc accatgtcaa ggtaacaaag ttcaaaggcg cggacgtcgt cgtcgagccg 60
agcacccctgc acttcagcag cgcaaaccag aagctcgctt acaagggttac actgaggacc 120
aaggccgctc agaagacacc cgagtacggt gccctgtcat ggagcgacgg cgttcacgta 180
gtccggagcc ccctggctct cacatggctg ccgccaatgt gagcttttct cctagtactg 240
tatcgttggt ctgccttagt cgagggcctg ggagcagaag cagctgtgcc ccggcctctt 300

ggtaagcgag gttgatgaat cagttgcgta gcagcagcca gctgcacagg actagcactt 360
gcccgaagaa agatggtgtg aagctccaac tcaaaacaag cttttattcc acaaat 416

<210> 3294
<211> 352
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-030-Q1-E1-A3

<400> 3294

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cggggtggaa catcatcttc ttcacgtgg ccttcttcat tgttggcggt gtcgttctct 120
tgttgcggtg gagaaggacg ttgttgatgt tcatcttgggt gtgcttcctc attttcttcg 180
tcttgggtgtg tcacacttgt ggatgcttct gtatcaactc ttggttcacc ttgtcatgag 240
gtanaagctt ccacttggat ggacgacgta ctctccttca actccgttgg acgaatcgtg 300
ccatagacaa gtcttggatt gcttccgagc gatctttatc tcctacatca at 352

<210> 3295
<211> 396
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-A7

<400> 3295

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tagcattagt ggttggttga gtactgattt gagtctccta aggtgtttcg gctacttagg 120
gataattgct tcttcatcaa ccaccaccgc cacttccgca taagcgtgcc caccatacac 180
ttccgccacc accaacttaa cccaattttg tttgagcttg tttgagttgt ggcttgtgtc 240
tcctaagggtg tttcggctac ttagggacgg caacttcaac tcggagacgt atatagccat 300
cattccactt ccgcattgcc aagtgcaaac caccaccgca ttcccgtac caccatttga 360
catttgacat ttgagatttt gagttcccggt gttttc 396

<210> 3296
<211> 404

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-A9
 <400> 3296

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 ctttaggaaa agtaaagcg ttggaaactt atcaacaacc atggaccgtg gtgcttcaac 120
 tctaccgtgg gcatagacc tctcggccg tgctgtccgc caccgcgtac catggggctt 180
 caactggtgc ttgggcatag tcgtcctga accgtgtctt cggccaccgt ggagcatggg 240
 gcttccactg gtgtgtgggt gggagtcccc tctagggaga ctccggggca tgtacagccc 300
 cgcttgtagc cgtggctagc atggcagaaa ctggaggag gttgtatcct aaggcaattc 360
 gttgaaccca agcgcgggga cctcacaag ggccttacct ccaa 404

<210> 3297
 <211> 332
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-B10
 <400> 3297

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 actcgataga ccattgctca tccaaccctc gaccatcgac tgatcatcca gcccgcaata 120
 tcacagggtc gtgtccatcc acgattcgac cttctaacat tcatccaacc ctctaacata 180
 acactatgtc ccgatcatca agaccacttc tacagcgac cattcatga agtactcttc 240
 gcctgcattc ctgaatatc agcctatctg acgccgtgat aggatacagc tagtacggat 300
 acgccgaaa tcgatctata tgccttactt tt 332

<210> 3298
 <211> 368
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-030-Q1-E1-B11
 <400> 3298

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 gcacaaacct tcattctggct gncggtttct tttgttcctc ctcatcacia acaattcatc 120
 ccagtgaacc gtatgctgtg tatcgcacac accttcatct ggctaccgtt ttcttttgg 180
 cctcctcatc gcaaacagtt aattgaaatg aactgtatgc ctttcatcac acacgcaact 240
 aaaaccttaa ccgtgtttga tgcattccgtc atcgcaaaca ttttatatat ttttgacgg 300
 tttcatacac cactgtttgt gattattgca tcgcacacag tttctcgaaa ggtctctgat 360
 tatagtgt 368

<210> 3299
 <211> 432
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-030-Q1-E1-B12
 <400> 3299

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 gcaagaaaaa ggaagcaaaa ataactgctt gggaaaacct gcagaaacan aagcagaggg 120
 agcaattcgg aagttggaga tgaagcttga aaagaaaagg tcactatcga tggatagaat 180
 tttgggcaaa ctacgttcct gctcaaaaag aaagcagaag gcatgcgcac tacagtttct 240
 gtgagcggng atcagtgtgc tgtcagtga gatcagtgtg ctgtgagggc aaccaagaag 300
 gcatecttga gaaggactag caagcctttc agctgctgtt tcacctacca tgctcgctag 360
 ttgtgatatg gttggtatct acaatgattg tagaaacttt ttgaaccttt gcagctcaag 420
 tcagccgacc ga 432

<210> 3300
 <211> 363
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-B9
 <400> 3300

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 ttatatatac ctttgctgt aactaatgtt ccttgggagg atctatctat ggactttact 120

ttccgttttac ctctaataaa caaggggatg gatagcagat ttgatgtctt cgatagattc 180
 tccaaaatgg aacactttat accacgacac tagagcgatg agcctgtaaa ggttgctgat 240
 ttgtactttc atgaaattat acgcttgcac agtgtgccaa atactagtgt ttcagatcat 300
 aatactaaat ttcttagcca ctttccgaga ttccgatggc ctacgttggg gacaaaacgg 360
 ctt 363

<210> 3301
 <211> 168
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-C1
 <400> 3301

ccgggtcgac gggttccaca catcgtcctc aaccagacac atgaacgga ccaaccatt 60
 ccgatggaat ggagccgtga catttcattc tactttattc cccaatcaaa cacaccctac 120
 atacatagcc aacaaccgaa atttccaatg gcaccatagt ccggcaaa 168

<210> 3302
 <211> 390
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-030-Q1-E1-C12
 <400> 3302

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 cttcaggcaa ctcaaaggag gctgaccaa cacagcttga aagctgaagc actaaccaca 120
 acatcaacat ccaacctttt gacatttgca atcccagttt tcacattacc atcctttccc 180
 acctcttttt gcttgtggta ttttcggagt ctgtagctat ttagtacttc ctatgtcgtg 240
 ggctaccaga ggctccttan aggctgcaaa ttttgtcgct gagtagaagc aagggaacgg 300
 acggaggggtg ctcccagttt ctctgagcc tatatgogtg tattaactga aggccgtgga 360
 aggcanaact cgtggggagc tctctgagat 390

<210> 3303

<211> 394
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-C6

 <400> 3303

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 ctgtccagtt gcgcttaatc aaattatcct ttgttaaaat tacttgttta tgcacagacc 120
 acataaacac tttaatcttc aaagggaactt tgactttcca aacatgtttg gaattcggaa 180
 taacactaga gttgatgaca ttgatataca tctacttgac cgtgaagtct ccagacctac 240
 taagcttcca acgcaactga tcaggctgat gagttaactg aacctccatc agtctactca 300
 ctagatgaat ccatgtttcc cactggtcac caacaagcac cctccgaaat tgaatattaa 360
 gagggattga gggactcctg gattaagggg tttt 394

<210> 3304
 <211> 420
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-C9

 <400> 3304

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 ggaggatccg aggaaggtag gtggaggctg ggatacgcca gagtgggaaga tcgtgcagcg 120
 gcgctcgta ccggagacgg tgaagaaaga gcctgtgccg gcgattccgg gtacttttct 180
 gctgatttct tagcaagggg ggattgggga ccgagggagg gacctcatgg aaagaatgga 240
 ggaggtaggg acacatcaca gaaagagatt gatgcctggt ggtcgtcttt ccagagtcgg 300
 gtcactgca agctagtaat ccatacaaa ccagagagcc cctacctgat tcgctcctcc 360
 acaagtagtt tttcttttag aataatacat ccagaagaag taattggggg gctgacagca 420

<210> 3305
 <211> 443
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-D10

<400> 3305

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caaggaagcc ggcggcgagg ggaagacgag gggcatgaag aagggcagca aggccaagaa 120
gggcgtggag acgtacaaga tctacatctt caaggtgctc aagcaggtgc acccgacat 180
cggcattctc tccaaggcca tgtccatcat gaactccttc atcaacgaca tcttcgagaa 240
gctcgccggg gagtcgccca agctcgcccg ctacaacaag aagcccacca tcacgtcccg 300
ggagatccag acctccgtcc gctcgtcct ccccggcgag ctcgccaagc acgcccgtctc 360
cgagggcacc aatgccgtca ccaagttcac ctctcgtag agtgctcctg ctctgtgtgc 420
tcgtagttag ctgtccgggt gtg 443

<210> 3306

<211> 171

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-D11

<400> 3306

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tcatgacacc gacgtcccag gacatgaata gggcaacact ctacaagatg attttgtgag 120
tctcgtattc ttcggttca cagtacttca acaatttctc ctgaactcaa g 171

<210> 3307

<211> 359

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-D12

<400> 3307

cgggtcgacg ggaattggga ccaagagcct tgcacgacct agggttagtt tgaagctgcc 60
ttgggacgtc cttccacctc cttggccgcc gtcccttgcg cctatatagg tacatccatc 120
tactagcgtt ttccttggga tttctttaat taaaagttag ccatcgcagc gtcattgtact 180
tcgtttgtgt ccaccgagca gagcaagacc gcatatggat gcatacaatc atcaataatt 240
cagatatatt tgcgacattc agattgcttt atcatagtct tgctcgttct tcgattgctt 300

ggacgaatat accatcgtgg tcaggctgac cgtgcttgcg gcatcgtcag taacctcag 359

<210> 3308

<211> 143

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-D2

<400> 3308

gggtcgacgg ggaggctgag ctccaccgcca gcatgacgg cgacggcgac tacgacttcg 60

ccgaccacga ctccgacgac tcccccgagc tcctctctca ccggcagcag caaaattact 120

gcatattgag tgaagcctgg tat 143

<210> 3309

<211> 346

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-D8

<400> 3309

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cataaacctc cttatatctt cctcaaaata gccaccatac ctacctatta tggcatttcc 120

atagcgattc cgagatatat tgccatgcaa ctttccaccg ttccggttcat catcatcatg 180

acatacatta cttttgacat actcccattg catgatcatg tagttgacat cgtatttgtg 240

gcaaagccac catgcataat ttttcataca tgtcactctt gattcattgc accatcccgg 300

tataccgccg gaggtattca gatagagtca tagtttgtgc tagttt 346

<210> 3310

<211> 340

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-D9

<400> 3310

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ggggcgcgta tgtgcctggc cgggaaacgg cccttcgtta atgcggagga atcctacaga 120

ttccggagag tcatcgggtg gttgaccagt ctacgccat atcatgacag tcggttttcg 180
gctttctcta ctgaggtgct cgcctggccg aatcaggga caatcgtagt agttctcctg 240
gtgccgcctt agccgataga gcggaacata atgcgaccga acacaagagc cgggcaaacc 300
aacatttgac caaaatcatg actcggagct gatgcatata 340

<210> 3311
<211> 410
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-030-Q1-E1-E1
<400> 3311

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tcacatatat gacgcttgcc taaacagcat ggcattgcat aattcacata cataatgcct 120
tgcaacaaga taacattgca taattcacat atataatgtc ttgcaacaag atggcattgc 180
ataattcaca tatatgataa ttagacacta aacatgtggc attcacacaa agcatgtcta 240
aactaagcaa atgacatagc aatgcaagat accatacaca caatatgagc aacataaacc 300
tgccaagtta gggcatgcac ctcggggggg ggggatatga ctggtcatct atctctgaat 360
cctcctctga ggagctatcg gtaaccagca agacatgcgc ttcgtcagat 410

<210> 3312
<211> 355
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-030-Q1-E1-E10
<400> 3312

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acacagacac acacagagag agaaagacac agagaaagga aaaagttagg tctgtcaaaa 120
agatcgtgac atgttatata cttgattccg tatacgtgga aagacaatac acaacatgtt 180
tgatgacaca gctggagaaa catcgaccat aagggaatga tctcatgggt tcatggattg 240
acacttttgt gaggtgggag agatggattg gtaattttgt gcaccaaaca taaggctcgcg 300
ggagatgtca atcagccatc gtcacatcat cctgcgtcaa catgacaccg cattc 355

<210> 3313
 <211> 410
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-030-Q1-E1-E12

 <400> 3313

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 aaaagaaaa ataaaatagg tttttaaaca gggttctatc tcctatacaa caaccaattc 120
 taacangtat tactcctata tttcagactt tgtgttaaat tcgtggtcca atgtttggtg 180
 ggaaaatcag aaatactatg cactgacgat agtttgcttg ctgtgtaacc tgtatcatca 240
 gtgtcccaca gtatatgctg cttgcaacat tttgagtgc gcatcaacat gtttcagctg 300
 ccttttgtgc atcctgggtg cctgattgtc atgtacatca attatcaaca aaacattcca 360
 attgtcttta agcatacatt gttatgatca gatatatgcc tttgaacttc 410

<210> 3314
 <211> 374
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-030-Q1-E1-F10

 <400> 3314

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 tgagatcagt tttagaccaa aggaaggatg aatcaattga acgcacattt aaaggaattg 120
 caaggcactt ccgcgaagtg ttctctgaat tagtgcaagg tggtcacaga tacatgggtt 180
 tgatgatgat aaacgatggt gatgctggcg atgatgacat ggatgaggac gtgcctcgtg 240
 aagcagatcc tgaaggagg atagagaagt atattggtgt gaaagtcaac gtttccttca 300
 ctggcaaggg agaaactcag tccatgaagc agttgtctgg aagagacaac acagtgggtg 360
 cattaatacg aatc 374

<210> 3315
 <211> 249
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-F11

<400> 3315

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gagatctagg gaattctgtg tccagatggg cgctcctcac atagaatggg ccaggaggtc 120
cgcgagggtcg ttcctcgact attagaagtt gctcttagac acatggatat ccctctgatg 180
ggagaacctg actatggcca cgaggatcat gcattgattg ttaaacctgc agtcgctcta 240
gcctgtaac 249

<210> 3316

<211> 193

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-F12

<400> 3316

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agaaattagt actgaaggcc ttttaaaatg agtcctgcat aatagtgttg ttcaatggga 120
tgcacactgt ttggtagtct gatcggctat ccttgggtgt gatttatgta ctgatttcaa 180
catcatatga cta 193

<210> 3317

<211> 242

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-F4

<400> 3317

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gcgacaaagt aactgttggg ggccgtctgg aactcatgcc caccacaacc tggatggagc 120
cacctatcat ttctgcccc acatcagtat cacttgtggg tactctacaa tccgacccta 180
ctttagtcag cacatgtatc acacattatg tatgtaatta tctaccggtg ctcaactccc 240
ta 242

<210> 3318
 <211> 406
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-G11

<400> 3318

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 gctagatcaa agaacacaaa gagatacatg agatccaaag tcaacaaagg taaggataca 120
 aaggtaaccg atcttctcca tgaggagggtc ttgaatccac aaggggatct tcccacgagg 180
 ggggatgttt cctatgaaat ctagtgc aaa tgaatcatat ggaaaaattc ctatggttta 240
 caatcctacg aatcaaacaa ccaagatagg aaaaattcct aatgattaga atcctccaaa 300
 attcctttga gaatcctttg aatcaaagaa gcccttaatc tatttgatga ttcattggaat 360
 tgtgtgttgt aaagcataaa gtaaaaacaa ataatggcaa tttaac 406

<210> 3319
 <211> 375
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-G12

<400> 3319

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 ttctgttttt cgtttttgtt tgcttatttt catgcatcta tggctagtat gatagtttat 120
 atcccataga gaagttggaa tgcagtacgt ttaataccaa aataagtaag taatgacttc 180
 attatactac cttatgtggt ggatttggtt tatttcacta acggagctta taagatttcc 240
 tgttgagttt tgtgttgtga agttttcaag ttttgggtaa agcttttatg gactatggta 300
 taaagggtgg caagagccta agcttgggga tgcctaacgc accccaagat attcaagggt 360
 agccaatagc ctaag 375

<210> 3320
 <211> 403
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-G8

<400> 3320

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tcctgcggtc agaaagggag agagcattcg cccaaattaa gtatggacta aaccgatgtg 120
ccgacggcaa accggcggtt ggagccttcc caattgcggt gccacaagg cgcatttgca 180
gttacacacg catgtgctca tacgtgtaca cctacctgca ttgactcgga tttcatttgc 240
tgcccgtttg tcagaaacgt ttagtacata tttctgcaga ctgcaggtcg atgattattc 300
atgggtttgt gaggtgacca actaacggtt ggtggatgag gaacgtttac ctgggcaagt 360
tcttccactg tgagaacata ctgccccaca tgtcatcgac act 403

<210> 3321

<211> 330

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-G9

<400> 3321

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ggcactactgg atggaaaacg cacgctagga ggcgaaacaca tcatatgtat cgacggatat 120
tctctcactg aaacacacta tacagttcta cataaatccg ccttggttagc tccgtaattg 180
gatgaacaca ataatttgat aactccata caccagagc ggtctgatca ctgcattata 240
cgtgaacaag ccaagagttt cgccagctgg ttgcagacat ttaccatgca tgacacctat 300
aatgaatatg acatatactt gcagtcccaa 330

<210> 3322

<211> 400

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-030-Q1-E1-H12

<400> 3322

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ctcctctcgc caggagcaga acccaccgcg tcggaccgcg ccgcgtaatc gccatggcga 120
atgaggaacc cgttgatccc aagaagtatc ttgaggagcg gtgcaagcca cagtgtgtaa 180

agccactgta tgagtatgag aaatgtatca agagagttga ggccgatgat actgggcaca 240
 agcactgcac tgggcaatat tttgactatt ggtcatgcat cgataaatgt gtagcaccaa 300
 agctctttga aaagctgaaa tgatattggg gcgctacttt cagtgagtca gcctgggcat 360
 tgggcagaac cttgttcaag ttgaaatatt tgtcgagtct 400

<210> 3323
 <211> 361
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-H2
 <400> 3323

gaagggtcta ggatacctag ggtttatgat gtctcgttgt ttttgcatgc tagcaagtca 60
 ctccgggata ccactttgaa gaattcgctt gtgttgaaag atcttattac tactgctgct 120
 ctgtagccta cctgtgataa cgtcaaatgt cgctgattat ggaatgcctt ttatcctgca 180
 cataaggcat acgtgtatcc ctaggctgcg agagcgggcg ctccatatga tgcaagcttg 240
 tcgtagcctg ctagcaaagt cctagccctt ctacagggtc accaaaattc aaggcattgg 300
 ccgtgcgttt tacaacatct tgactggtaa agccctgtca ttatggaact tattcccctt 360
 g 361

<210> 3324
 <211> 323
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-030-Q1-E1-H4
 <400> 3324

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 ttttgttttc ttttgctaac ggagctcacg agttttctac ttttaagtttt gtgttggtgaa 120
 gttttcaagt tttgggtaaa gatttgatgg attatggaac aaggagtgga aagagcctaa 180
 ccttggggat gcccttgga cccgcaagat aatctaagga cacctataag ctaaagcttg 240
 gggatgcccc ggaatgaatc cctccttcg tagacatcta ccgtaactt tacttggagc 300
 tatagctgta ttcaccacac gat 323

<210> 3325
 <211> 392
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-030-Q1-E1-H9

<400> 3325

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 gcctgggtcca gatctcgtgg ccgccatggc ggagaagtcc gcggagtcag cgaacaatgt 180
 aatcatcgaa gaggtgaaca agggcctgaa ccctggaatg atagtctctc ttgtggttgc 240
 taccaccctg ctgcttttct ttgttgggaa ctatgcgctg tacctgtatg cgcagaagac 300
 gtcacctccg aagaagaaga agccagtctc caagaagaag ctcaagaggg aaaagctgaa 360
 gcaagggggtt tctgcnacag gggagtgaag ag 392

<210> 3326
 <211> 103
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-A10

<400> 3326

acgggggatga aaccaaggcg gagaagcggg cgccggtgtc caaggaggcc ggcggcgagg 60
 ggaatacgac ggcaggaag aaggggagct aggccattaa gag 103

<210> 3327
 <211> 134
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-A12

<400> 3327

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 tgcagtcttt ttctcttgga tggcttgat aatggctatg gagaaagaac tcatacaaaa 120

aatagccaat gaaa

134

<210> 3328

<211> 286

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-A9

<400> 3328

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gtagatgcgt tggagacgta tcaaccagca tggagcgtgg tgcttccact ctatcgtggg 120
catacacgct cctcggccgg tgtcatccgc gagcgcgtag cagggggcct ccagtggtgc 180
gtgagcatatc tgcctcctga gacgtgtcgt ccgccagctt ggagcatggg gcttccactg 240
gtgtgtgggt gggagttccc tcgagggaga ctccggggca tgtaga 286

<210> 3329

<211> 187

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-B9

<400> 3329

acgggtaact taccacccat gtggtgatcc tgggcatgga tggctcctatg tagatagaca 60
ggcattcgag ataccttcgt tctttctaga gtctgtgctc agagctatta tctagggatg 120
tgcttgtgtg tctgtaggac ttgagtatcg gatcgtatgg atcctagact ttttgaacat 180
gttgtag 187

<210> 3330

<211> 219

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E1-C10

<400> 3330

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ggcttcgcct aaactccgct acagtattat ccaggactat ggtggcacgg ggcaccgcac 120

acgggtaagg aacacatcac gtggatcaac ttgtgtgttt ctgggggtgac tctacctcag 180
 tacatgaggg acccaccggt gagggggcct cctggcccg 219

<210> 3331
 <211> 321
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E1-D10
 <400> 3331

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 gcaaaggcgt tatggggcac caccaagagt tcctccaaga taaataaaga agtccaggag 120
 ctttttagggg ttacactgag caaggcccga gtcaagctga ctgagaatac cattttcagt 180
 cggatcggtta cggactctaa tggttcagat gcattcaatg gtctctatgt cggatcgttt 240
 agtccatagg gccccgaagt tgtccagctc cgtcgaaagt ttggccattg ggatgggact 300
 gatgacgtgg agttgtgtcg a 321

<210> 3332
 <211> 166
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E1-D9
 <400> 3332

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 tcattttctc atttacggcg gattgtctaa catcgatcat cttgcacaca tcggtgctg 120
 cgccgctcag aactctaccg aggcaccccg atggatgcct caaact 166

<210> 3333
 <211> 290
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E1-F10
 <400> 3333

gacgggggtat aggaagaagt ggggtgggtgg tgtcatgggc tccaagtcgc aagcgaagac 60

caaggccagg gaaaggetta tcgcaaagga ggctgcgcag cggatgaact aagtttagca 120
 ttgttgaacc atatctattc ctcaccttg agtagtgtgc aagcatactg tggcagtttg 180
 gctccagttt tgaaagtcac ttttgtttgt ctgaaacatc ttggaaagaa cagtgtgaaga 240
 atgaagtatt tctgtttaat gccagttagt atttttgtcg aaaaaaagag 290

<210> 3334
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E1-H10
 <400> 3334

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 tattttactt tgcattctta tcataaaaat accaaaaata ttatcttacc atatctttca 120
 gatctcactc tcgtaagtgg ccttataggg attgacaacc cctatttgca ttggctgtga 180
 ggatttattt gttttgtgca ggtacgaggg actcgcgcgt agcctcctac tggattgata 240
 ccttggttct caaaaactga gggaaatact tacgctactt ttctgcatca tcccttctc 300
 ttcggggaaa accaacacag tgctcaagag gtagcaactt ccatactact ttgctactaa 360
 atactttgct gcaaatagta agtctttcaa gtgtggttgg attgacaact cagctgcta 419

<210> 3335
 <211> 167
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-A1
 <400> 3335

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 atcggcacag taagtgtcac agtttttgtg gttacacaca acgttatcac tgcacgtttc 120
 atcgtttcaa ctggtgctcc tcccacttgc gcctccaccg atcttac 167

<210> 3336
 <211> 284
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-A12

<400> 3336

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tttaactgaa ctttccttgt caacaaacaa caggtctctt gggactttcc cttgtcgtgg 120
agtactagtc gaggggtctt actcttcctt ttcccttttt ttccaatcc agtcctcaat 180
actcacggat aaccatgctg gccgtagctt taggtgagat gtagcagacg tactacttgg 240
tttagcacag tatatcacac gcgatcccg attgcttctt ctgc 284

<210> 3337

<211> 363

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-A2

<400> 3337

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atgccaaagg tccattaacg ctgccacgta ttctcaggta tatagatatg cgcacagtcc 120
tgatggcaaa gttatagaat cgcactatca cataggggta tagcttggtg ggtatgccac 180
acaacaccca tgttcaagtc actggtataa acttggatta caatcaagta cgacgtgctg 240
gacccattga gaatctacgt ctcaaagtgt ctggaattga agacgaggat atcatggcag 300
gtttcgtact ttcaagtgt gctaattccta ttggtgcttt cactgaattt aatgccacgc 360
tgc 363

<210> 3338

<211> 375

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-A5

<400> 3338

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tcaattccta atcattcttc cagcgcactt tactccaaag aattttgcct tcttagcttg 180

actcgatctc acgatattgg attgattggc acaccgcgca tctggcattc gcttctccta 240
tctatctctt ccaactaagc tgatcactgg aaaatatgtc ctctgcatg caatcattcc 300
agagccaact acgacgatac ctgatcttcc actctgttca ctggaggaaa gactcgaaag 360
tgaacaattc ttcaa 375

<210> 3339
<211> 217
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-A7

<400> 3339

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gctggcagcc gtcgcaactc atgcttcttg tgcaccgatt ggatgtactg gtgggtggcag 120
tcgttctacg gcacagtgtc tccctgagct ctgagttgac tggcggttagc atctgtagca 180
tgtgttgagg aatctctcct gcatgaggtc tccattc 217

<210> 3340
<211> 246
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-A9

<400> 3340

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atgtgtcaac tttaagggtt atatgtttgg gctgtgcttt tgtgatattt tgggctgtca 120
gtgctttgac tgggtttttac catcccaatg tttggcattc aggtacgttt tagcattact 180
tctgcactcg tggtaagtta ccttgccatg tcgcaacagt agttttgtct ggtcagtggt 240
gtttgt 246

<210> 3341
<211> 339
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-B1

<400> 3341

gaggtatgta cttttggata tgatgatatt gtgctttaga aagccttggt ttatatcaac 60
gtctgggcag ttcgataca tcaactcgag catgatgtcc ttcgaccatt ggtcatcgat 120
tacgcgggca ccctctagga catcctcaat atatogetct ggcttgcggt ggtccttgcc 180
acctgagtgg accctcaatt ggcacgatgg cggccttcat tttcgcgag tgcattctga 240
cacgggcatg ggccagacgc gcattttcca tacatgacga acggttgatc atgacaattt 300
gggacagcgc gtcaacgagt cgctgcacca gaccaaatt 339

<210> 3342

<211> 216

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-B12

<400> 3342

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ttcgggttta gctgttttgg gctatgcgcg tttggtctgg cccgagcatt ggcttggtt 120
tgcgcatcgc gccgcagtgc atgctcggct agtcacgagc ctagtcttgg ggatgcgcca 180
ggcctccgtt cttttctctc cgttcattgg ttcctt 216

<210> 3343

<211> 355

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-B2

<400> 3343

cttttggatt ctcatccgtt tgtgcttttg ttgccttggt tttattcgtc gtctgggcag 60
ttcggcttca tcggctcgggt catgctgtcc ttcggtcatt ggccctctgt tgcgcgggca 120
ccctctagga catcctcaat atagcgctct ggattgcgggt ggtccttgcc tccgggtggg 180
ccctcaactg ccacgatggc ggcttctatt ttcgcccagt gcattctgat caccggcttg 240
ggccagccgc gcactttcta tacatgacga ccgcttgacc atgaccattt ggtacacctc 300
ttcagcgagt cgctgcacca ggccaaaata tctgcttgcg acgggttcgg ctggc 355

<210> 3344
 <211> 175
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-031-Q1-E2-B6

 <400> 3344

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 atgtgacttt gggatgcttg ttttcagatt ctggtttcta ctgaggttgt aagatattct 120
 tgtctactgc ttgtggcoga atagtcgacg ggatcgTTTT ttgcttattt aggtg 175

<210> 3345
 <211> 226
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-031-Q1-E2-B7

 <400> 3345

 ctgcggttgc tgcagcgctc tcgattgcat cattgtgcaa tgcggatatgt ggtttccagc 60
 cgtggtgttc ctgtatgtcg attactaaag gcggaagtcg atgtggtata gactccatgt 120
 ccatgtggtc gctttcttga tgttctactt aggtagccga gcgtagggtc tgaaacttca 180
 tctgcacagt tgcctacatc aagttcttcg gcgacctttt cacaaa 226

<210> 3346
 <211> 344
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-031-Q1-E2-B9

 <400> 3346

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 agataccttc tttctttcta gagtctgtac tcagactagt tgcttccgca tgtgcttgta 120
 tgtttgtatg acttgagtgt cgggtcatgt gaccctatc tgtatgaaca tgttatgtat 180
 ggctatctgg agcctttaaa taagtacttg agttgtagag ttttgttgtg atgccatgtt 240
 gtatgtactc atatcgggca tattgtgtgt atgattgaaa tgcttggtat gagtgggac 300

cgacaatcta gttgtgtaac cttggcagct tttcttatgg ggaa

344

<210> 3347

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-C1

<400> 3347

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aggaggagga gctcaagcac gaccaccaag aggcaccacc gcagcagcag actcgaagga 120
gaccatatgc aaggcacctc ctcttcggtt gtgagagtgt ccaggggtca tgggtgcggc 180
taatgcctat gtctgtggct gcaacttgaca ctgccctctc tttaaggga catatcattt 240
tttataactc tgctatattt tcccaagtct ttattatctt gcctagcctt gtcttgatat 300
gtattgcttg atgctaatta cccaagttag tgcattgatgt taaggataac ctgagaacac 360
ttgcctaagt ttataagata tgacatgtca cagttcaaaa a 401

<210> 3348

<211> 272

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-031-Q1-E2-C10

<400> 3348

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ggcttcgcct aaactccgct acagtattat cgaggactat ggtggcaggg ggcaccgcac 120
acggctaagg aacagatcac gtggatcaac ttgtgtgttt ctgggggtgcc tctacctcag 180
tacataaagg agccaagggg gagggggcct ccggtcagga ggagggccca ngaggagtcc 240
tacnctccc gggagtncca ctcccccccc cc 272

<210> 3349

<211> 345

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-C11

<400> 3349

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gttttggtat atcaacttct gatcaaccgc tcccttgcaa attaggtgg gctagtcaag 120
caattcgttt cggcaccggt attatctaaa cttctccttg caacatatcc attcatggct 180
aacctatatg gtgtggagct caaagtactc atcaacatag cctcgcttct taagaatatg 240
tttgcggtta cgattactat tgcttgcaac attctgcaga acacagcggg ggcacaagaa 300
caaaggggtg tcgcaaattg tatatctgtg actctgatgt caatc 345

<210> 3350

<211> 132

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-C6

<400> 3350

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ttgtccccgg ttccttgat cctgtgcctc ggcttgctgt cggggctgtg ttgttgtttc 120
gattttgtgg gg 132

<210> 3351

<211> 250

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-C7

<400> 3351

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ttctcgcctc ctttcgctcg atgcatgttg tgtactattc tgttctaata gcgtccgtgt 120
ctgtctgtgt ctgtcgggtg gctgtagtat ataagctgga tttagtgtgg agaaaacgtc 180
gtgatttgac gagattgtcg actagtctga attcactggg cgttggttta aatagtcttt 240
gctgggagac 250

<210> 3352

<211> 316

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-C8
 <400> 3352
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 gtagatccat tagtagtgct cagcgacggc ctgaaagata gtataatgtc cagcacttat 180
 ctgatatcag gccaaagttcg cagacagtga gtggtgtagt actgcgcttc tctgccgctc 240
 tgcgtgcaag cacttgtctg atgatgtatc cagccagtaa tcttgaatta ataataacct 300
 gcatctgtac aactca 316

<210> 3353
 <211> 361
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-C9
 <400> 3353
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 ctgtgataaa tcttctacag cgtagtattt ttctcataat ttttggagtt gtggaagtat 180
 tgatactctt gcattcttta cagactatac tgttttgcca gattgctggt gtggttgcac 240
 tgtttgcata tgtttgcctg tttaatgatt ctatttgagg ataggagtat tgaatatgca 300
 gaggcattta gtatgcaatg ttgaataata attttagtga tttgttacag tagaaaatga 360
 t 361

<210> 3354
 <211> 362
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-D1
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caggaagaag ggcagcaagg ccaacaaggg cgttgagacg tacaagatct acatcttcaa 120
 ggtgctcaag caggtgtacc cggacatctg catctcctcc aaggccatgt ccatcatgaa 180
 ctcttcatc aactacatct tctataagct cgctgggag tccgccaatc tcgctcgcta 240
 caacatgagg ctactatca cgtcccgaga gatcctgacc tccgtccggc tcgtcctccc 300
 cggtgagctc gctaagcacc ccgtctctca tggcaccatc gccgtcacca ttttcacctc 360
 at 362

<210> 3355
 <211> 307
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-D11

<400> 3355

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 caagctgact gagaatacca ttttcaatcg gatcgttacg gactctaattg gtcagatcc 180
 attcaatggt ctctatgtag gagcgtttag tccatatggg cccgaagttag tacagctccg 240
 tcgaaagttt ggcaattgga atagtactga tgacgtggaa tttttcgagt atgtccaagc 300
 ggttaag 307

<210> 3356
 <211> 355
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-D5

<400> 3356

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 cgtaattcag atagttgaat gatcaacctt ctttttctca agggccatct acgactgac 180
 atggctcttc tgcccgttac tgtaagacac tgcacatgta caacatgtat gtttatttgg 240
 caagcagttt cagtctgttc caccatctt tcagcgcaca tatatatata ttggaaatag 300

ttttccttcc acacttaacc ttatcacacg ccatcaagggt agcagcgact caaga 355

<210> 3357
 <211> 263
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-D6
 <400> 3357

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 tcgtatttca gatcttcgaa atatgctcct cgtgtttctca agggatcatct ctactgatt 180
 atagctctta tgctcgcaat cgttatatat tgtacgtgta tgacacgtat gtttggttgg 240
 caagcagtta aagtctgttc cac 263

<210> 3358
 <211> 305
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-D7
 <400> 3358

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 gtttgcatg ctcggtgcat tatcactatt ctctacgtgc tccgtcggtg atttgggtcg 120
 ttactgtggt cttagactct ttcacatcga ttttctacgg gtcactactc tgtcatttca 180
 gttctcctaa aatcattcgt aataaattgc tcctggacaa cactggattc tatacgtaaa 240
 tcagatcaag ctctgcgggt ccctgtccta atggctcact ggatcccttt ctagcctgga 300
 tgctt 305

<210> 3359
 <211> 139
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-D9
 <400> 3359

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tcctggactc gagcatcgtg cgttcacgga cggcgacgct gctgggggag ttggtcgagc 120
tggggacgat gtgcttggg 139

<210> 3360
<211> 381
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-031-Q1-E2-E1
<400> 3360

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gccccgacgt gatggaggcc gtgtactcgt gggccagagg gtccaagtcc caccagatca 120
tggagatgac acaggtgttc gagggcagcc tgatcagggc catcaggcgg ctggaggagg 180
tcctgcagca gctgatcctg gcatcccagt cgatcgggtga gaccagctc gaatccaagc 240
tcgaggaggc ggtcagcaag attaagaggg acatcgtgtt cgccgcgtcc ctgtacttgt 300
gacacctcct gcgtggtttg gttccatgac aggagctcat gcgcggggat agagacgtta 360
cattgtctgc cgttcttgtc c 381

<210> 3361
<211> 385
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-031-Q1-E2-E10
<400> 3361

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cataactcac aagccgtgtt ctcttcacgg actccgtcga aaagagacca tcacggctac 120
acacgcgggt gatgtatttt aattaagtca agtgtcaagt tctctacagc cggacattaa 180
caaattccca tctgccacat aaccgcgggc acggctctcg aaagtttata ccctgcaggg 240
gtgtcccaac ttagccatt ataagctctc atggtcaacg aacgatattc cttctcccg 300
gaagacccga tcagtttcgg aatcccggtt acaagacatt tcgagaatgg taaaacaagt 360
ccagcaagcc accccctgtg ccgac 385

<210> 3362
<211> 239
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-E12

<400> 3362

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cgatttcact gggcaggcag aggcagccat gtacctgtaa cacaactccg aatgatttga 180
actaatgatg agtatcagcc gagctacgct tgctggccgc tgtgatcaca acaatccccg 239

<210> 3363
<211> 254
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-E2

<400> 3363

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cccaacaaag ccgtagcgac ggaatccgtt ggctcaactt ggtttccgcg gttgtttaaa 120
ccttcagaac cagtgcata gacatggcgt gtgtccctgt ttaacttgta ttttcttagt 180
gtcagtgttt gtgaagtctt tggcagatga tgaatctgtt ccgcgtgcaa aatatacttt 240
tggattcgta cata 254

<210> 3364
<211> 387
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-E5

<400> 3364

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aggccatggt cctcctgccc gatcactttt gatcgaaggg accacgccac tagcatccgt 180

catgatggat tcgccgcatt ggtcctatac ccagttatcg acggatttca gctcagcaga 240
 gtcctaaggg acggcggcag cagcctgaac ctgctttatc acgatacagt gcaataaatg 300
 ggtatcgatc ctcaaggatt aaaccacag agacatacct ttaaaggcgt cataccaggt 360
 gtagaaacta gctgtacatg ctcggtt 387

<210> 3365
 <211> 315
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-E7
 <400> 3365

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 tcgggtacag gttaccagta gcttcattta tgagctctgg catatggatg tcaacatgag 180
 ttaccataga tgtcttcgtc aggacagggt gtctgtgac gactgattga ggttcagtca 240
 atcctaaggt tgctgagggg tatgctagat ctagccatag ctcgatggac tggagtaagt 300
 agctatcagt tggca 315

<210> 3366
 <211> 372
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-E9
 <400> 3366

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 ggatggctct gataccaact tgtaacgcc acgatgcggc tatatctccc acgtgtcgag 180
 gcatgactta gaggcataac cgcatagtgg ttttgtcgca agaaggggtca tcttcacaca 240
 atcccatgta atgaacaaga atgggataaa gagttggctt acaatcgcca cttcacacaa 300
 aacatagata taattcatat atcatccaaa attcagacac ataaaccgac tacggtcaaa 360
 aaccagatga aa 372

<210> 3367
 <211> 267
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-F11

<400> 3367

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 ctgcctcaga tggtcggagt gaccattac attcagctcg gtagatcagc tcaggtgcgc 180
 agctagggct ggcgccctcc catgctttgc tccccagtca tcagcagcgt gcaacttatg 240
 aagaccatca tctacgtgct aggcgag 267

<210> 3368
 <211> 312
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-F7

<400> 3368

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 tagccgatgg gagtgaaaa ctgcgccgat gatgtgtagg gtactggtag aggtgtgagc 180
 atgtcttgga tttttctttt cttgttgacg tttagctgat atgtgtcagg tgtaattggt 240
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<210> 3369
 <211> 379
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-F9

<400> 3369

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 ttgttattac cctgttcct ctttctatgc ggctgaaaag ctagacctgg actagtgtat 180
 cattatttgc tttttagta aaataaaagg cgcagttgta cggtaaacta aataaatgat 240
 gtttattttc gtagtgggtg gcactatttg tgcagtttgc tggcaatgta aaatgtacac 300
 ccaagatata acatgggttt gttgccaaaa aaaaaaaaaa aaaagaacga cgccaactaa 360
 aaaaaaaggg gcggcccaa 379

<210> 3370
 <211> 409
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-G1
 <400> 3370

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 gtatttaaag tgggtctgat cggggactcg gccgtcggca agtcgcagat cctggcgcg 180
 ttcgcgcgca acgagttcag cctcgactcc aaggccacca tcggtgtcga gttccagacg 240
 cgcacgctcg tcacgcacca caagtccgtc aaggcccaga tctgggacac cgccggccag 300
 gagaggtaca gagctgtcac gactgcatat tacagaggcg ctttgggagc tctgctagtc 360
 tatgacatca ccaagcgcca gagctttgac cacatacctc gctggctgg 409

<210> 3371
 <211> 205
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-G11
 <400> 3371

ggtaggtgtc gggccttctt gctatggtgc tgcggtgtgc tgggatggcc tggcccgtt 60
 ttcttttttc atttcgtctc gtctcgtctt cctgtcctgg tcagttcatt cgggattgtc 120
 ttgtatgggg actttacgtt atactotcat gtcaggtctt tctcttatct tatcagattg 180
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<210> 3372
 <211> 282
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-031-Q1-E2-G2

<400> 3372

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 agtcattgtg gatccccctgt gaacggagtc tgtaaagggtt tggaaatcta cctttaagac 120
 ttactagact gattgggcga agactgggtg tccttaccta accgggatat aggtgaagac 180
 gtgggtcttct aaattcactc tcagtctccc taaccagata tgaagttgtc aaaacaactg 240
 gaactgggtct accaaatcct tgtcttcacc aaactactgg tt 282

<210> 3373
 <211> 282
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-G3

<400> 3373

acgggtctcgg gccatggtaa tgctacacc gtgggaatac cgtgtctcag gccacacagt 60
 gatatgatgt gttaccgct ggatcgatgt gacttggaat tgggggtctgt gacacctttg 120
 gtatcagagc ctgactgcct gtatgattac caagccaatc tgggtccatct tgagtctaga 180
 aatgctttac ttatgtctcg gaatttattc tggaacggaa cctttgggtc tttttactcc 240
 ttatacctca tggctttcgg ataggagtta gcctcttctc tt 282

<210> 3374
 <211> 346
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-G5

<400> 3374

cgggaacttc gatccccat gcgtgccgac tgctcattgg atttgctgtc gtccatgatt 60

acgtgttcat ctgctgcttc aacagcttca tgggtgttcac tcagttgcat ctggacattt 120
ggatctcctc taatgccatg tctatcacga agtcctgcat cagctcttgc gacgagaacc 180
tcgctagaga tgtcgttatg ctggtgctgc acagattgaa ggggtgccatc acgtcgtgtg 240
acattcaata ttccgtactc ctcgagatcc ccgtcgagct caacatgcac gctctcttcg 300
aagtcaccat ggctatcacc atgttcatat cctcataagc tgttca 346

<210> 3375
<211> 387
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-031-Q1-E2-G6
<400> 3375

gacggaataa tcaagaaggc gattgctgcc cggcgaacct cgataaagac gatcatattt 60
ccaccatcac acataaggga ttctgatgat cttgctgata acgtaaagga gggctctgag 120
gttcactttg ttcacacata tactgaaata tacaacttag ctttccacaa tgagacatac 180
acgagttatc acgcaagcaa ttcaaacagg actattcaga ttgcgcaagg tctttggggc 240
aagactgaat actgaactaa ttttgcagct acgccattct tttcaacatc aggattaact 300
ttttgttate atgatttttt ttctactgc cccatgtgac tgtttaagga aattttgact 360
agaatgtccc tagatagctg acgatcc 387

<210> 3376
<211> 418
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-031-Q1-E2-G8
<400> 3376

gacggaaaaa gtggctgtga aattctccca ccatgatgtt acgggtcctt ctaactgatg 60
tgcggaacac ttcacctact ccgcactctgt gcactctgct gtggtcagct ccctagctgt 120
cttgcgagc caatcatctg ctactatcgg ctcggtgcta ctggaaaaca tcggcggatt 180
cagcctaaga aaacgggcta agtggtaaac aggtgggtgt ggtgggttgt tgttgttgtt 240
cccctgattc tgggtctgga ctagcaactg catcaatgtg ttctgctgct ggatcaactg 300

ggtgagctcc ggtggaaagg tatatccggg gtcacgtctc ggaggcatct gagggtttag 360
 aaaagatgag atataagaat agaggggggc taaagagaag aactaccca tatgcaca 418

<210> 3377
 <211> 392
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-H1
 <400> 3377

catctacctc gatagagaac tttcctcggt gcctgacccg tgatcaaaaa gaaaaaagga 60
 tgaaactcga gaaaaacatg attgtcaatg gcaattctat gaacggagag aagatttttg 120
 tgggcactag gaacatgcaa gattcttttg agatgaattt tacgactagg ggtattaaaa 180
 attgaatggc caatgtgacg tatacccata ccttcaccac tggccgtatg aatttgatcc 240
 ttgccacgat atttctcctt catgggtgact ttctcgagct cgttggtgat gtggttggtg 300
 gcgcccgtgt caacgtacca gtttgtgtca actccatagg agccatcggc cgccgcggaa 360
 atttctcctt catcttgcca ggagtcacca tc 392

<210> 3378
 <211> 388
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-031-Q1-E2-H2
 <400> 3378

agtgttgagc tacttttcct taatccctag attacaatgg ctgttcatga acaaggaaat 60
 agcttcagat ttgcgttatc atagtgttct atttctattg acgtagcaaa tctaatttcc 120
 ctatcttcct aatataaaca atctgggtat tgttccattc ttttaattct atggcagatg 180
 ggacctggac gaacagtccg gccaccaaga aatgccccgc aatctcaagg tcaacattct 240
 gggagtacct cagcatcaaa atccaggaag gtacgtggga taaataaggg aaatggcttg 300
 gagcgtttga tcaaaagggc aggtcatcca ctaaacttga ccatcttcga agagagaaga 360
 cctattggag aaaatactga actacttt 388

<210> 3379

<211> 366
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-031-Q1-E2-H3

 <400> 3379

 agcgccggca agcatttaag tgactgacgc acatgctact ctacattgct atgaagtttg 60
 agcagcacct cgaagcaacc agaaatagtt tccgggtgagc tttgggtcaat gtgtcctgaa 120
 caacatgctt ctgtgcttac taaatcaggc accttttggt tcgtatcgat cagacaagga 180
 tctttcgcac tttggcgtag tccaagcaag atatgtgtac acttttagtct taacttgctg 240
 cctctatgct gaaaagtagt gtatgatata gtctatgac tttaaacttt gttgttatcg 300
 ctgtgctcag aatcgggtta tcatcgctta ctccatatat gttaaagcct tttccccctc 360
 taatcc 366

<210> 3380
 <211> 423
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-031-Q1-E2-H5

 <400> 3380

 acgggggatcg ccaactgtcta gatctccagc ccagccaaac ttttctcacc ttcgaagaag 60
 aagcagcagc atccatggcc cccaaggctg ctgagaagaa gccagtggag aagacccccg 120
 cgggcaagaa gcccaaggcg gagaagaagg tgccggcgtc caaggagggc ggcgacaaga 180
 aggggaagaa gaaggccaag aaaagcgtgg agacgtacaa gatctacatc ttcaagggtg 240
 tcaagcaggt gcaccccgac atcggcacat cctccaaggc catgtccatc atgaactcct 300
 tcatcaacga catctttgag aagctcgccg gtgagtcgcg caagctcgcg cgctacaaca 360
 agaagcccac catcacgtcc cgcgagatcc agacctcgt ccgcctcgtc ctccctggcg 420
 aac 423

<210> 3381
 <211> 389
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-H6

<400> 3381

ctacctgaag gcgtgcttga tagcctctca ccagagcaag tcctgaactg caacacggag 60
gaacaatgtg tggagctggt gagccatatt cctgtaacac atgctgcact tctcagctgg 120
gttgtagagc tcatggctga tgttgtcgaa gaagaggagt cgaacaagat gaatgcccgg 180
aatatcgcta tggttttcgc acccaatatg acacagatgt cagatcctct tactgctctg 240
atgcacgctg ttcaagtcac gaacttgctc aagaccctgg ttctcaaac actcagagaa 300
cgtgaggatg atgaaggatc atattcgacc ttttcgtcat cgccaacttt atccgatgga 360
cttgatgagg tggaccggga gcacgacca 389

<210> 3382

<211> 328

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-031-Q1-E2-H9

<400> 3382

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ccgcagtaat aatgacgaat gagccatcaa atcacaggcc caacctttcc cactgtgaag 120
ttgctcggac gaaggaacca tcatgacttc gttgaattca gcttcttgaa gaaaactact 180
gtaccaactg tcctgctagc tacagtagta ctgtactcca ccagaggcct cctttgggtc 240
ataggatagg aattttatag gaatatgaaa atcataggaa gtgagatgac aggcatctca 300
attcctatag agaaagagat gccatttg 328

<210> 3383

<211> 371

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-A10

<400> 3383

gctcgtgca gtccccgtgg acgcagagaa tccaacgtga tgttcttggg agaaaatccc 60
tgaaagattc atttttctcg agagaagagg tatacttggc ttcggacgat ctagaggagc 120

caatgtgaga ttaagcattg tctcagtggc gttgtattcg atccagactc ttactggttt 180
 cccactcgca agcctcaagc ttatgttctt ggcctctcgg tcatcacaat gtgcagtcgg 240
 tgcagaagca gtggagatca ctcgatttag gtcgatgcct acgtggttat cgtcaatata 300
 attcatctca accgcttgca cgggtgtcagt ttcaattgca agagttcgat ttcaggagtt 360
 tccattgttg g 371

<210> 3384
 <211> 392
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-032-Q1-E1-A11
 <400> 3384

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 cgtcagcgag ttcttcggtt acgcggccaa cagcatcctg tacaaccgcg ggggtgtacc 120
 ggaggagagc ttcggaagg tgaagaagta cggcctcccc atgctgctca cgcaggacga 180
 ggccgtcaag accttctca ccaacctcac ctcccagctc tcagagtggc tggagggtgg 240
 gaagctgcag aggattgtgc tggatcatcat gagcaaggcc accggcgagg tgctcgagcg 300
 ctggaacttc aacatcatca ctgacgggga ggtcgtcgag aaaggggagg tgaaggagaa 360
 gagcgacggg gagatcatga gggagaatca gg 392

<210> 3385
 <211> 118
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-032-Q1-E1-A6
 <400> 3385

aggcattcaa ataaggtttc tttctcttct ttcgtaagag cctagctggc aggaccttca 60
 ctctgcttcg gtggcagtgt cttctcttct ggggcaaacg cttgcagctc gtcccgtg 118

<210> 3386
 <211> 204
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-B3

<400> 3386

gtgggaactg atgggtacga ccagagcgtg tcggacgaca cgagtaccag tgagacctct 60
atcatcttcc tctgtcacat cctgaacagg aggcaggcag tcttgagtta atgcggtgat 120
acagctgcta gcaacatatt ctcaggaagg aggaataagt ttgccttcac tgggctttca 180
attttcctgg ctaagcaggc gtaa 204

<210> 3387

<211> 350

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-B7

<400> 3387

cccatccctt ggtcatttga cttcgactac gcatcataga aagaggggaat ttgttcgtgt 60
acagtcacaa attgatcaaa tatgtcgtga gattgctggc accacagagg tcggtgccca 120
cgtggctacg ccacacgtca tcgcggatta tttgatacct gagaggcctg atgattttcc 180
gtccacctc caggagcttc agactagata caccaatagg ttggctaagg ttcctgagta 240
tgtctccatg gtacattatc tatgtgccgt cttgggcatg gatgttctca gtaccgtgac 300
tgaagttcac cgcactccag atgactccag ttgctgattc ctgcaagagc 350

<210> 3388

<211> 202

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-B9

<400> 3388

gggtgggtcg gtgcatctgc tccattcagc cacatgctag gagactttag ggccatttga 60
cccccaacta cgccacgcta actcagggct cacggataca aacatggcct atcgacaagg 120
gtcgcgtgta ccagtaaccg gcgctctctc ggggtgtagcc cctcgtcaaa gccgatccca 180
gtgagaggtc gccgccgcgc tg 202

<210> 3389

<211> 402
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-032-Q1-E1-C11

 <400> 3389

gacggcatgc cccagaaggc accctctttc gtcttcattc attggtaact ttacttggag 60
 ctatatTTTT attcaccaca tgatatgtgt tttgcttggg gcatcatttt tttgcttgat 120
 gtttgaataa aataccaata tctgaaatta ttaaagtgtt gagagtcttc acatagttgc 180
 ataattattc gactactcat tgatcctcac ttatatcttt tggagtagtt tgtcatttgc 240
 tctagtgttt cacttatatc ttttagagc acgatggtag ttttattttg aagaaatata 300
 tgaactctca tgcttcactt agattatttt gagagtctta aacagcatgt taatttgctt 360
 tgggtatgaa ttcagtctta atatgatggg catccaagag gg 402

<210> 3390
 <211> 274
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-032-Q1-E1-C5

 <400> 3390

gctgctctaa ctctacgt tgagcagttc aatacgaaga cgaatcagag aatgagggaa 60
 tttgttactg tacagtcaca acttgatcaa atatgtggtg agattgctgg caccatagag 120
 gtcggtgagc aggtggctac gccacacgtc aacgaggatg atttgacact tgacaggcat 180
 gaagatttgc ggtctcatct ccatgagctt gagagagaga acagcaatat gttggcgag 240
 gctcctcagt atgtttgcat ggtacatgat ctct 274

<210> 3391
 <211> 182
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-032-Q1-E1-C6

 <400> 3391

ctctggtatg tcccttcttc tcttctctt tgtccttgcc gttgggtcgt ccttggcggt 60

gtgcttggcc ttctccggtt gcttgccctgg ggcctttttt cccgtgcccg ttctgttttc 120
 gtgcgcttcc tttggggggc ttgtccggtt tcttttctcc ttcttctgtc ttggcgcttt 180
 gg 182

<210> 3392
 <211> 323
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-032-Q1-E1-D11
 <400> 3392

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 tgggtgcggat gaacggggcg cggatgatga tgcggcggat tgcgcgacc cgcggtgct 120
 cgacctgttt gggcgcggcc accctgcccc tgetgcgctg catgccgtcg tcgctgctcc 180
 cctgtggatg tgatggatg gctcagctgc gtgcgttcta gtatctgaca attggttttc 240
 cgttggttga aggcagacac catctgtaat ctctcaccta agctactctt aaatcctact 300
 ctacttgaca ttcaaaacca aca 323

<210> 3393
 <211> 215
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-032-Q1-E1-D12
 <400> 3393

ccggacctca aatcagtaaa aatgaatttc agagatcctc cagtaaaagt ggaacctcaa 60
 tagctcctgc tcctaaagt acgaatacga gagttcaaag gcccaagcta actcctgaat 120
 tgttgggctc ggaggatggt ctggcggtg ttctcacgg tttccctaaa tccgctcaag 180
 tcgctgggcc gacgcgatac acagaagtct ttttt 215

<210> 3394
 <211> 216
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-032-Q1-E1-D8

<400> 3394

gggcatgcgg cagctttgtt cccatggacc cttctggtgt tttgcatcca cacgggcggt 60
ttccttcgcc ccgtgcccgt cgtggcggtt tggtttctg tctgcggggg ggcggtggt 120
ggtttcgtcg gggccctggg gcgccgtctg ctgtgggggt tcgggtcggg gggcctccgt 180
gtgtcgcggc gctgcgtgcc tcgcggtctg tcgctc 216

<210> 3395

<211> 272

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-D9

<400> 3395

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aaacggatca aaccagagac aatgagatgg ccagaccgtt gccggacttg gttcttcggg 120
tctggcgga ccttggaacc tgttacaggg ttttgccagt ggacggacca gcatctggca 180
ataccagtca tgaaccttgt ttgggaacct agttatttca aaaatttcct acgttcacgc 240
aagctcatgg tgatggcata tccacgaggg ga 272

<210> 3396

<211> 124

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-E1

<400> 3396

gaggaggggg aagaggacgt cgatgtgggc taagcggctg ggcccgaactt ggcccccgct 60
tcgtttcacg actactacgt gtcttctctg gccctgcaag atgcggatgt ttccgatgtc 120
gccc 124

<210> 3397

<211> 426

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-E10

<400> 3397

cccggcctta accaaaaaaa aaaaatcaat tttgtggttt tcttggttaa gactgggtca 60
aacccggttta catgcatgtg ttggacgtgt gaaaaaatc aacgtgccgt tacgtgcgtc 120
cgttgggaaa catgcaaatg ttatTTTtga tgacacaaaa aacgttttgc tccaacacat 180
gtgagcaata ccggatgcgt aaatgggtgat ttagtccaat acagttgacc ggtatcgagc 240
caaatgatat tagctttgtc cggaatgtgg ttgtagctac aaatattatc caaaatttac 300
ctacaactgg tttatcaagt gtatatagaa aaacaattta aaaagaaaat taataaataa 360
tagtttttaa atgttgaaga tcataataat tctgaataat tcttattaga acaaagaaac 420
caaata 426

<210> 3398

<211> 236

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-E11

<400> 3398

gtactagaac agagtatgac tctatatgaa tgcctccggc ggtgtaccgg gatatgcaac 60
gaaccaagag taacatgtat gaaagaatta tgaacgggtgg ctttgccaca aatactatgt 120
caacta~~at~~atg atcatgcaaa gcaatatgac aatgatgaac gtgtcatgat aaacggaacg 180
gtggaaagtt gcatggcaat atatcccga atggttgtgg agccccaaaa ggaggt 236

<210> 3399

<211> 318

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-E12

<400> 3399

gaggccgaca agatcgcccg ctacaacaag aagccacca tcacctcccg ggagatccag 60
acctccgtcc gctcgtcct ccccggggag ctcgccaagc acgccgtctc cgagggcacc 120
aaggccgtca ccaagttcac ctctcttag attcagtctc tggcagctgt agttgggtgc 180
tgtttaccta gaattagcat tgctcaatgg aaattggtgg agtattgttt agttcgtagt 240

tggtttggtg atgttaccgt gtcacatggt gactgatcga tctgaaatac tagcaatgat 300
ctggtgcatc ttttgggc 318

<210> 3400
<211> 384
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-E2

<400> 3400

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tataactcaat atttttttagg ctatcacgat aaccgtcata cttttgcatc ttaattttct 120
agagcaactt attgtactgt ccaagatgtg acgatatgca taaacatcta gacttaacct 180
atgcaaagat gcatcttagg tactattggt tttatctcgg cctctttgag agttatctca 240
tcttagtcat tttagaaaca tatatcgagt tgttacctct aagtatccct tttatccaat 300
ccgaacttcg acgtagaaaag tatgaaatca ctaacatgac agctgggtaa attggcatac 360
tctagcagtc gttgcccctc tcat 384

<210> 3401
<211> 337
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-E8

<400> 3401

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tcggctaata gccgtgtggg tgccactgct gctgtgtact ctgcagcaat ccttgagtac 120
cttactgccg aggtccttga gctggccggg aacgctagca gggatctcaa cgtgaagcgt 180
atcaccccgcc gccacctgca gcttgcatc cgtggagatg aggagctgga caccctcatc 240
aagggcacca tcgctggtgg tgggtgcatc cctcacatcc acaggtcagt catcaagagg 300
acctccaagg agtgaatgaa atgcaataac gggtagt 337

<210> 3402
<211> 397
<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-F11

<400> 3402

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tgacagcagc ctgaatgagg aagagaatga tgatggtgct gagaacaagg ctggagaaga 120

ggatgctgtc gtcacaatcg tggttgaggc caaggatgag ctgaagaagc ctctgaagcg 180

caagggagct gaggaggagg ccaaagatga gaagaagatc aagaccactg ctgctgctcc 240

tgatgtggaa aatgcagctg aagaagacgc cgagatgggt gaaaaggagg aagaagaagg 300

tgcccagaag gctcagaaga agcgcaaggg gcgtgctggg gctgcaggta ctgcagctgg 360

cggcggtaa aggaagaagg ccagccctgc tgctgct 397

<210> 3403

<211> 247

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-F7

<400> 3403

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cttggtgtc tgcctccttc ttttcctagg gcatcaattt tcaacctcgt tacttggtat 120

ttggtgccct gtttgagctt aaacactgtg tctcgatcgc gctttcggca cgatggctaa 180

gcatttaa at cgctagcatc attgttgctc tccatctggt gtcagatctt taatggtgtc 240

atggacc 247

<210> 3404

<211> 387

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-G10

<400> 3404

cccacttcca caatgaataa cctttcattc acttctcacg ttcgatgaag ttgcagtgtt 60

gaaattttat ctggtgaagc accagaagag tatgactcgt gaaaactttc gggttcacag 120

ggtttagaga aggcataatgt tcaaccata ggggttctt agaaacatat accacaagtt 180
tcaagagtaa ataacacaag cccgaaagca gagcatgggt ggccaagcag aggatacaac 240
ttaacaaagg cattatgtat cagggaaga actcacaagg tgatcaaag tgaaggacac 300
tgtcggataa caatccaaca aacgacttga tggccacaa aggatctgat acgagtatcg 360
gtactcaact agaggaagaa gaatgca 387

<210> 3405
<211> 219
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-032-Q1-E1-G11
<400> 3405

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ctccttgga ttctgaattg acttcccttg aagtcacgta actttgggac cagacgaaga 120
tgccgattgt ccttctaagt atctgacttt ggaattcaac gctccactt ttgcattaag 180
gtcattgtag ttgcaggcca gcttgtggtg caattcaga 219

<210> 3406
<211> 413
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-032-Q1-E1-G12
<400> 3406

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tctcctcccc ctcccacccc gcatcggaga ggaagatcgc cgcgccagcg ccaccatacc 120
cgaccctcga ctccaccact ctccggcgtg tgtgctagtc tagtctgtct ccaccccgac 180
gaatttgctt cgctgatag cgattaggct gcaatgggta gatgattaat ttttgaagcc 240
cagctcatcg ttaataacag gccgaaagcc cagaaaccca gcagcagtgt gcaacgagac 300
gatcagattg ttctctttta ccatcgtctc ggacaaggca acagagagca ggcagaagga 360
tggatgagca agatgataaa agtacaagc ctgagctgaa actatgtggg gac 413

<210> 3407

<211> 364
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-032-Q1-E1-G4

 <400> 3407

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 tacgccgagc tgaacgagat gctgaccgg gagcttgccg aggacggcta ctccggcggtg 180
 gaggtacgcy tgacgccgat gcgcacggag atcatcatca gggccacgcy gacgcagaac 240
 gtgcttggtg agaaggggccg caggatcagg gagctcacct ccgtcgtcca gaagcgcttc 300
 aacttcgcyg agaacggcgt tgagctttac gccgagaagg tcgtcaaccg tggcctctgc 360
 gccca 364

<210> 3408
 <211> 375
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-032-Q1-E1-G5

 <400> 3408

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 attatTTTTg taggaaaata ctatactgta ctatacacat ggcatgatca ttgggcagaa 180
 gtttggggca aggagatgaa gtacagaagg tggattagtt gacttttaaag agcacttgaa 240
 aaaaatcact cagagaaaac caactccaaa ataaaagcca aatactgcaa aagtttttgt 300
 tgggtccaatt tttttcattt tttaataatg aaaatgacat gttacaaaat tcacggtgtg 360
 actacaccat ttccc 375

<210> 3409
 <211> 407
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-032-Q1-E1-G6

<400> 3409

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agctctgatt agccccctg ccaaaggaac tccacttccg ctgatcttac gtggaaagtc 120
gaagaacgcg atgctgtcaa ggttcctctt tctggggcaa attgtttggg ctgggagaac 180
aggagtatac aagaacaggg agcgagcaga gtttcttggc aggatagcat tttattgctt 240
tctcggatcc aatacctgta ctacgatcat cgagctagcc gagcttcagc ggctttccaa 300
atcgattaag acgtttagaga aggacctcaa gcaccaagag ctgtacaaga acgagcagta 360
tcggatgaag gctaagaagt ccaggagag gctggttggc tcatcaa 407

<210> 3410

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-G7

<400> 3410

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tgttcctgat atatatctta cttgggagtt agaaactgaa caacgattta catgtttaca 180
atatactgag gagagacgag ttgctgctgc tgtttgtgct ttcactagtt ttgcatgtgt 240
atggtggtct gaacattgta gattatatcc tattccaact acttgggctg ctttgaaaac 300
tgctatgctg acgcgttggg ttccaccata ttatcaacgt gaattgcttc aaaaattgca 360
gcgtttaaga caaggaaaaa attctgtaga agaattattat caggaattac aaactggcat 420
gattagatgt ggtattgttg agga 444

<210> 3411

<211> 455

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-G8

<400> 3411

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ccagcccagg gagctgggtct cttacaccag caacgaggag aagtggatct acggtgtgaa 120
ctaaccgccg catcgtcttc agaagagcca aagaagctcc agtccctttc cgtaatcgcc 180
tctagaccat ggcagagtgc aataacaccg cgacccgggc gacctttcag tcggtgtcgc 240
ccttgccctt gtctcatcgt gatgcaataa ggcccgaaga aatttaaaga gtttgtttgt 300
acctttgaat attatagagc gtgcacggag caatcgtgat gttcaaataa aaccgtcgcc 360
ttcaggcgct tgattttgat ggatgctgtt tgttttcattg tgttgcccaa attcaggcct 420
acattctctg cacttttcac tgtcactgta gctga 455

<210> 3412

<211> 397

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-G9

<400> 3412

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agttcgactt caccgccatc cctctttgtg gcattgatga tgccgagtcc tccacgattc 120
tttttcaaga tgggtcggcg acgagtacga ctacggagac cttcaaggac cacgctttgg 180
aggcaagcga cttggtgacg atcaaggatg atgtttccat gttaggaggc gagagcgatg 240
atgtgccatc ttcggccttc atccatggcg acgatgacaa gatgatcgag catgggattt 300
ccccttcggt catggaggag agtgatgatg tgccatcttc ggccttcacg catgggttgag 360
tatttcacct cgaccactgt gacctatgat gacctga 397

<210> 3413

<211> 354

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-H10

<400> 3413

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tgcgagaacg gacctgagct gtgtgcgggtg gtgtcataag gagcctatcc atctccacta 120
gaattatccc aagtttcact tcacatcgtg atgttgtttt acctttttcc tgtcattgtc 180

ctgctataac ggatagcgct ccctgttggc gccgccgccg gcggggatgc cctagtgggtg 240
gaggggtgtat gtcctcttcc gcggggtgcc cctgcttgta cctagatggt tactctttcc 300
gtccattgtc accggctaac attgtgataa tatcagtctg ggtaatgtta gatt 354

<210> 3414
<211> 264
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-032-Q1-E1-H11
<400> 3414

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taacgaaagt taatatactt agccgcaatt aatgatgaac ggacgggtgga tggatatcga 120
ccactaattc tccaagtgc cctacaacc tcctctactt gtccccctat accacatcct 180
atctggtaaa gattaagtca agacttccca ccaaaacttc acttttaatt ttgataaacc 240
aaacgttttt aaaaaacaaa atgt 264

<210> 3415
<211> 175
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-032-Q1-E1-H2
<400> 3415

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gcggtcgagt ggcggtcgtc cgcggctgtc ggggtggctgg ttggttctgg ggttggttcg 120
ttgggcgtgt gtgcttctgc tgccttgggtg tcttcgctgc cggtgtgttg tgttc 175

<210> 3416
<211> 423
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-032-Q1-E1-H3
<400> 3416

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taaccaaaaa ctaccacaat tgtcggaac gtgacgaaaa actaccactt tacgtttttg 120
 tgcgaaaaac taccaaattt agactaaacc gtggcaaaaa actaccaact cgggaaatcg 180
 ctgccttcgc ccgcgctaac cccgattctg accggttggg ccgcggaatc agtcgccacg 240
 ctggcgaaaca gacggccgcc gcgcgttgac ggccgttaac ggcccgtcca ttgtcggaac 300
 ggcgcctgtc ggtgggcca taagtgaag cgagctcagg cactcgctca gtctctctct 360
 cggcgctcgc tctcactcgt cctcactcca tctctctcct ctccctcgcc cgggtgctct 420
 gac 423

<210> 3417
 <211> 380
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-H4

<400> 3417

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 cacgtgagcg cttggtcaaa acgtgcagct cgacggagta gaccaagttt ggtgtggctt 120
 ggcattggcg cagaactgcg tcttgttgcc ggcatgcgtt gcacatctcc tattcctagc 180
 gggttgggtt cagctcatgt ggagtgggtg cgtcaggcca gtgattcagt tagtttacgt 240
 acgtacagtg gtcgtaccgc atcggatctg agcagcccag gatcacgcag tcgagactct 300
 aatgttcgct ggcacgttgg tgccagtatg cccagttggc cgcgatcaag tctggccact 360
 cgtcacagtc ggttcacggt 380

<210> 3418
 <211> 432
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-032-Q1-E1-H7

<400> 3418

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 agagatatgc aaagcacttc tagacaggaa tctgaggaga ctctgaacc tgccatccct 180

atggaatatt atgaacaaac acatgatgaa aatccccgagg aggatgacga ggaaaccctt 240
 ggtaggggca agagacaaag gaccgcaaag acctttggtg atgatttctt cgtgcacctc 300
 gtggatgata ctcccacttc tatttcagaa gcgtatgcct ctccagaagc tgactactgg 360
 aaggatgcgg tccgtagcga gatggattcc atcatggcta acgggacatg ggagatcact 420
 gactgtccct at 432

<210> 3419
 <211> 396
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-033-Q1-E1-A3
 <400> 3419

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 ctctgtggaag aagaggctca acatcgcatc agatgttgct cgcggaatgg agtatcttca 120
 caccctcgca cagcagtgtc acattcacag ggatcttaag tcggcaaaca ttctacttgg 180
 cgatgatttc cgagcaaagg tgtcggattt cgggctcctt aaatctgcgc cggacgggaa 240
 cttctctgtg gcaaccagac cagctggaac ttttggatac ttggcgcttg aatatgctgt 300
 gaccggaaaa atcaccacaa aagcggacgt tticagcttc ggggtggtgc tgatggagct 360
 gataaccgga atgaccgcca tcgacgagag acgtat 396

<210> 3420
 <211> 384
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-033-Q1-E1-A9
 <400> 3420

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 taagctgggg ccaggtggct atgcgggtgc aatgcctaag tgggataagt ctgagaaaga 180
 gatggaggat gcaggtgcc aatcggttac taagagatgg cccccaggg tcaggacttg 240
 gttctatgcg catgggggga gttggaccgg aagacaggca atgtttcgac gagggcaagt 300

ctgaaggag cgcacgatgc gatacttctt gcaatagaag aggcacgatc ggnggtgttc 360
cagcccaaca gagagaacga caag 384

<210> 3421
<211> 423
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-B1

<400> 3421

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gctgaaagag atggcgcccc gaggtccgt agaaagagaa gagaagtgtt gttgtatcgc 180
caatttttcg aaatataccg tctgctgttc ctttttttcc cgccttggtg ctcctttttt 240
tcaccttggt gtttgactag acggctcgaa atagacagaa ctcttgatcg gggcctgtat 300
ttaattgtga gattctttgt agcgcagccg gagtagtaga acatggtgcc gtttttcgca 360
gcatttttcg cagcaaaaaa aaagaaagaa aagaaaaaaa aagagggaga aaaaaaaaag 420
aaa 423

<210> 3422
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-B3

<400> 3422

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taatgctgac gagaaggcac ctctggcac tgcacggcgg aggagacggc ggagcgagcc 180
gccacggcag agggggctgg atgcagtggg tggcgccagt aagccttgag ttgatgtgca 240
ctggagctgg aatttttcac tgaaagagtt gtggattggc atgtagatac gggctctgct 300
gcatgatgta atatttctg tacattttgg cataccgact ttacaattcg tgggaaatgt 360
gttttagtga cggaacatgg agtttgaggg tggagggc 397

<210> 3423
 <211> 390
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-C1

 <400> 3423

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 tgttcaagga cggcgtgctg gagacggaga tccaggactc cgacgacccc cgcctctcca 300
 agatgcgcaa ggaggtgatt gcaggagga aggacaccat ggaggtggac aacgacttct 360
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<210> 3424
 <211> 349
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-033-Q1-E1-C10

 <400> 3424

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 aagcaggtgc accccgacat cggcatctcc tccaaggcca tgtccatcat gaactccttc 180
 atcaacgaca tcttcgagaa gctcgccgcc gaggcgcga agctcgcccg ctacaacaag 240
 aagcccacca tcacctcccg ggagatccag acctcgtcc gcctcgtcct ccccggggag 300
 ctcgccaagc acgccgtctc cgagggcacc aagggccgtc acaagttca 349

<210> 3425
 <211> 387
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations

<223> Clone ID: LIB103-033-Q1-E1-D2

<400> 3425

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cgtgagtctc ccgattcctg accacctcca tacagggtgcc tctcccaatg ctccaccatg 180
tagtagaggc tggctcttgc atgagagccc acttctctaa tttttccttg cctctctttc 240
ctccacatat gcaaaaatgc catgtaaagc gcactattgt acttactttt acttgctcct 300
acagggtgta agcttgccac atangcataa agtctgatgt ggcaagttaa tcaagaagag 360
agagactagt ttgggtgacc aagaaag 387

<210> 3426

<211> 395

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-D3

<400> 3426

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gtaagcgtgt ttaacctgac atgcgctgta attgtaagcc ctttccgcat acctcacagc 180
ttgttgtctt atgagggtgct gcaaggcatc aggcgtggctt gtgccgcctc agtcattatt 240
atcatttgta acttggttaga gtgcacatta atctcacgag gacatacaca atacttatgc 300
tgctgttggt gtaacctgac gacctttatg cctttgcctt gtgttggtat tcacagtctt 360
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<210> 3427

<211> 322

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-033-Q1-E1-E1

<400> 3427

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tccggtgggca tggggtggcc gattatgaag actcccaggc ggaatcgcg gcaggtacag 120
cccggagtca gtttgacatt ttgggtggta ataattccaa catggataac cagagtgaaa 180
ataaatacta cacggactcc aaaaatcccg aagtacattt tcaccgtcct ctaaaaatag 240
gccggacaaa gtggaaattt atttggcccg aaaatgcaat ttgaaaaaa cagattattc 300
ctaaatcaca taaaatagcg at 322

<210> 3428
<211> 384
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-E2

<400> 3428

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ccatgtgcta cagcctccat gtccatgtcc tccctttctt caggttctac aggggagccc 180
agggcagggc cagcagcttc agctgcacaa atgcaaccat caagaagttc aaggacgccc 240
tcgcaaagca ctgcgccgac aggtgcagcc tcggcccggc gcggggggctc gaggaggcgg 300
agctcttggc tctggcggca aacaaggacc tggaattcac ctacaacgag aagccgacgc 360
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<210> 3429
<211> 375
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-F2

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aacccttgcg cggaaccgc cctggctgtg tatgtgagt catgcacgtg tctccctcg 180
gtcttccaac aaagagtgtg catcggtat aaaacacaga gtgtagtaca tgatgtacat 240
ctacacttcc aatgatttag cctttaatct aaatcgatat tgattgacta atgcaccaac 300

ttgtgctgta gatataggcg acatgtccaa cccttaatta cagcaatcaa cggccttcaa 360
ttaatcctcc taacc 375

<210> 3430
<211> 332
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-F9

<400> 3430

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aatgccatag ggtaatccta cggcctcgct aagtccgaag tattcggtc ctaaattggag 180
catcagtcgt gctctgtagc tgtctagtca gctatgggaa gtatagatga gtcctctgaa 240
acatgaggct aactcataat ctcatcgtagc gcttctaggt atageggctt acatgatttc 300
agatcgtaga caccgatagg atcaggcata ta 332

<210> 3431
<211> 386
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-033-Q1-E1-G4

<400> 3431

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atgctgtgcc gtgagagctc gttcgagggc tccgcgggc caggacatct ctgctgaggc 180
tgccgcttcg cggcgggacc tctctagagc ttccgcagcc ttggtctttg cttcttggtt 240
atatgtccac tcgaaactcc tcctaccggt catggaggaa tgagttgaca agaaagacca 300
gttttgtggg tgatgaggag aggaactgtg aagtaatttt caagtgggta gtttttatag 360
cctggtgcta agtgtagaaca catatt 386

<210> 3432
<211> 368

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-033-Q1-E1-H10
 <400> 3432

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 ttcaagggtgc tgaagcaggt gcaccccgac atcggcatct cctccaaggc catgtccatc 180
 atgaactcct tcatcaacga catcttcgag aagctcgccg gcgacgccgc caagctggcg 240
 cggtaacaaca agaagccaag catcacgtcc cgggagatcc agacctcgt ccgcctcgtc 300
 ctccccggcg agctcgccaa gcacgccgtc tccgagggca ccaatgctgt caccaagttc 360
 acctcctc 368

<210> 3433
 <211> 374
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-033-Q1-E1-H12
 <400> 3433

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 gcaatctata tccatatacc accaccgctg ccatatccta ccaccatata tccacgagca 300
 atccgagttc ctttcatatt gggtttggtt ttgagatcca tctaatttcc gattcgtggt 360
 tccttgctg agta 374

<210> 3434
 <211> 439
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-033-Q1-E1-H2

<400> 3434

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acatccacta tcgaggaccc actcaatggc tttgggttga tcatcctgca gatgaattaa 120
tgcaacttaa aaactcattt acctcaacaa tgaaaaatat gacaacaatt caacaaatta 180
atttcaacaa gttaaagaac tgattaaagc aatataagga cgtgaaaaaa tgaaattcaa 240
tttcttcagg attagccctg cgtcctatca aggatgctca ggtctccagc anattcttca 300
gacgattatg tgcgtctgga gacctgaccc tgcagaagag attagttctt tttattcact 360
accacatct gaaggggtgg caaagagttc atcattctgc gagctccata caagaaggat 420
ggcatagaag ccaatccat 439

<210> 3435

<211> 51

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-A10

<400> 3435

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<210> 3436

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-A2

<400> 3436

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tttggcattc cacacagtta ttagtcttcg aggggaggga cttgaatctt ggacggatga 120
cgagattagg atgaattttt ttttgcggtt aaaggagtt ttattgcaa ttcatagagt 180
tacagtcgag acgccacaca tctcaatata aggaggaact gagcgtagcc agacagttgt 240
ggctcgctcc gtacggctaa agtttgccag acaatcacca actctatttt gagaacgact 300
aagtttctga ggaacaaact ccctactacc agctaagtag ttgatctcca atactaagtg 360
gtcataagct gaacgctgga gagcatccat acacaggcgt gacaacgctt cagaagaatc 420

<210> 3437
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-A3

<400> 3437

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acgatagtct gtcaacttag tgatgtttta accttctcaa ggaccggcgt agccacactc 120
ggttcaaata aagttggaga aactgacacc cgccagccac ctatgtgcaa agcacatcgg 180
tagaaccagt ctgcgtaag tgtacgcgta atgttgggtcc gggccgcttc atccaacaat 240
accgccgaac caaagtatga catgctggta agcagtatga cttgtatcgc ccacaactca 300
cttgtgttct actcgtgcat ataacatcta cagcttcgaa tcgaagatca tcaagaccca 360
taggctctga acttctctct tctcttggtc ctgttctctg agtatatgca ctgt 414

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<210> 3438
 <211> 401
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-A4

<400> 3438

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atgcagtgat cactactttc tgggtgagtt ctcttcagaa gaacaagtcc attctagttt 120
catgaaaatg atttaactca tggcttcttc cattcttggt ttcatgcatg attgtagaaa 180
ttctatcgag ttcttcggga gcatagggct ggagcggacc agatcgtgct gcgccaatgc 240
aagaagaagg cccgccagat gcagtacgag gtgcgctatg tggccatatc cacatactac 300
cacgacgttc ttggtgtgaa gatgaccaag gaagaagcgc ggaggatggg cattaccttg 360
gagaggcccg agttcttggc ggtaagtata aaagattttt c 401

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 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-A7

<400> 3439

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tggaagcag cggggcacga agaagggcat caatgccaa tagggcgtgg agacgtacaa 120
gatctacatc ttcaatgtgc tcaagcaggt gcaccacgac gttggcatct cctccaaggc 180
catgtccatc atgaactcct tcatcatcga tctgtctat aagctcgtc gctaattctt 240
caattcgtca aagtacactt tcacacccat taccattca cgggagatcc aaatcatcat 300
cggcctcttc aacgtcggag agctcacaat gtatccattc ttccaaggtc tctc 354

<210> 3440

<211> 421

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-034-Q1-E1-B1

<400> 3440

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tgagtggcga ttttgctagg aaaatatcat agccaaattt cgctgttgga tcntggattt 120
tgctaggaaa attaagttga tgcttgtgac aactctgctt tcctactcaa ttgaatactg 180
ctgtgcatg accatcatag gcaaactctg ttgttgatc ctgtgtgtgc ggcgcctctc 240
tcaactttgg cttcctgaga atgacctttc tcaaagttgc ccagtcattg aagcgcataa 300
tgatcactgg ccggtttaac gtgggaacta acaaaatgtt gccaaagcctc caaaaacctc 360
tcgcaacatc taatgttatc atgacagaaa aaaataactt ttttgaatcc aggtgggttg 420
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<210> 3441

<211> 430

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-B10

<400> 3441

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ttctggaatg atggcttttcg gtgaaataaa atagaaaaca agttctgaag tagtctagat 120
 gggcaaggaa agaatactga caaacggaat aattcgagag gataagaaga agctggaacc 180
 atgaatcttc gagagaacgg acaagattta gagaaactct tcttcgatct tcaaagacg 240
 acgagaaaca ccaccaaata tggtgagata ctccgggaga atgaaaagag gaaaggttga 300
 acaacaatg aaaagaattt gaaagcgatc ttggagaagg catgtgactg atggaatcca 360
 ttcttatgtc acacttgaaa agaatttgag aatcactcta gaaaattaga aaagtcaggt 420
 aagattctgg 430

<210> 3442
 <211> 375
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-B12
 <400> 3442

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 tcggtgacaa attcatctct cegtttatgt ggtattgtgg ttttcgtaca actggagctt 120
 gttactagta gagactagag agtaccatgg ctacaactct gctgcttgtt tgcgtgtctt 180
 ggcatgtatt ggatttgtag tgcgttcgta tgtaggcatg ttcactcgat gctatgtttc 240
 tttgcttgaa ttatttatct tatgtgaggt ttcaagcaag tggatttgaa atacagtact 300
 actccctccg ttccaaaaaa aaaaaaaaaa aataaaaaaa aaaaaaaaaa aaaaaacaaa 360
 aaagaaaaca aaaag 375

<210> 3443
 <211> 438
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-B4
 <400> 3443

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 gaaggagatg aacggagacg atgaagctga tgggagtata cacgggtgtc tctttggttt 120
 gggccactt gttaggtgta acaatgaaat attaggataa aatgcagca tacatttttt 180

aatcaaggga taaggaaaat atatgtaaaa taacagaaaa tgtgcaaaac accttatttt 240
 gttggaagtt ttgcaattaa aatagaatca caacgtagca gacttgtggg acgtttccat 300
 caatgccatg catcgagaat aaataaagta actaaattac attcccaaatt ttcaaaacaa 360
 ggacttagaa attattctaa tgatgtgaca gggcattaac aaaatgttta tatatgactc 420
 taacacatcg attaaatc 438

<210> 3444
 <211> 288
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-B5

<400> 3444
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 ccaagtgaag gtctgcatgc catcgatcatg actgatcgac cagttgatga tgcccgtagg 180
 tacacagata ctttacatat tgccagatcc tgtgtgatca gcacctcacg caggctgggtc 240
 atctagcaat tggacttgct gagcgtttct cagtcgcaga tgcgcatg 288

<210> 3445
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-B6

<400> 3445
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 atgaaaagaa acccgatatc acgaaacgac cacacactcc tattggagat gaggtggaat 120
 gcaagaagcc aaagatagca gaaggctcaa ggtgccaaagg agaagaacct gaggctggag 180
 ggataaagaa ttccgcctgg gtctgatgac aggggaatgc agtacacacc agaagcatca 240
 aaactatgat ctggaacagt atcctgaata aactattttc tggattatga atgaattctg 300
 aagcatgggg ctataagtga attatgtatc atggatttgt aactatggtg gatgttaagt 360
 gaacgttcta tcagtgcacg gtgatgacaa ggcattaaca aaatgtttat agatgactcc 420

accacatcga ttaaa

435

<210> 3446

<211> 429

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-034-Q1-E1-C1

<400> 3446

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ctctatcaag tggatcaga tttccaagtt gctcggtagg attttacagt ttttcgtagt 120

ttagatcgag tctgttcttc atacctacag tccacgaaaa agccacanaa aaaaaattag 180

ggttagttca tcatatccga accaatctga gcctttgcat aatcttttta gggttttgct 240

ttgttgagtt tgcggttgca tcatcgggtc agttgctggg cttagcgtct agtcttttag 300

agtttcgagt tctggtcata agttgtcacg ccgcccgcgc accatcatca tcgcccctgc 360

catctaccac caccgttccg aatccgtatc catatnacac caccaatccg tgccgaaata 420

caacaccga 429

<210> 3447

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-C12

<400> 3447

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ggtcactgtt atcgagaggc aacccaacac cagctcgatc ggcttcagta agcagcagca 120

gtgatcgatc gctcgggttc agtttagcagc tgcagcgaag gaattgctcg ggttcagtca 180

gcagcgaatt aatcgctcgg gttcagttaa cacccaaggg atcgatcgct ctgattcagt 240

aacgtgtgat cgctctgggt tcagttagcc aatgcctcgc acacacgcat gtacacaaga 300

gaaacacaca aaccacactg catcgctcag ccccgaccac ccatcgtaac cgggaactcc 360

gcgatatttt cctcgccctc gcttcaacca cgatttattc tatcatggac cgcccaaaga 420

atgtcatgca gctgt

435

<210> 3448
<211> 394
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-C2

<400> 3448

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agatcgacga cggatcctca tctggtacgg tggatgaggg acgtcgaggt gttgctgtgg 120
acgacgtcgt cggggaagag gctccggctg ggtggcggac ggagcagggg gtggggtttc 180
gtcgcggggt ttcgcggcct cgggtgtacga atgggtgggc ggatgggata gcagtgggga 240
accatggctt agagacgcgc ttgtccgaaa tgtggggtaa gttacgaaag taccgccacc 300
gatttttaggc ggttctttcg gttcaggggt accacgggca tttcgcgtgt cgggatttca 360
caggaggtgg gagttttcgc gcgcgttgta attt 394

<210> 3449
<211> 412
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-C4

<400> 3449

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aggagaccgg gttgtggtcg tcgcggtttt tttgggtcgt ccgggtcaaa tttccccctt 120
ttttactatt acttagatgc gactcgtcac attagcacgt gataatttga tatgagctag 180
ctgactagct cggtttccac gcgggcagtg tgatgattct gatggatttg atgtatgcgc 240
tgcggaaca ttacctctga ttgtctagta gttattacca tccaacttgt ttacaatcat 300
catatgtgat ttccttgga gccgcaaacg acaacttcga cggacggctg gtgcctggac 360
atatccgaac tcctgttgaa ctcggcggtc ttgcgtcggg gtacagacac gc 412

<210> 3450
<211> 341
<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-D1

<400> 3450

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cgtcacaatg acactacttg cttgcggact caccgacgac atctgagata tagtacaacg 120
cataagagca gttcgagtac acgggcaact ctgtcaactc tatcactgat ccgcattatg 180
ctcgggcaat acgcaagggt gggtcacatcg tcatcaagga acgtcactga caagttgttg 240
aagtacacag ctctataact gtgaagatta gtcacacaca ctcatgatta gtagatactg 300
agatcggtta tgaaaaggag cttgaggatc acgttcattc a 341

<210> 3451

<211> 257

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-D12

<400> 3451

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gagatggccg tcaacgagga cacatctgtc tacgtcggcg gcctgcccta cgacgccgac 120
gaggatatgc tccgcagcta ctttgggctc tgcggcacca tcctctccgt ccaggtgata 180
aatgatgaga gaatcagggg caagtgttag gggtttgttt cttctcgtcc gcaaagggct 240
gcccttcctg ctctctt 257

<210> 3452

<211> 418

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-D2

<400> 3452

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gcggcgatgg gaagacgatg ggcatgaaga agggcagcaa ggccaagaag ggcgtggaga 120
cgtacaagat ctacatcttc aaggtgctca agcaggtgca cccggacatc ggcatctcct 180

ccaaggccat gtccatcatg aactccttca tcaacgacat ctcgagaag ctcgccgggg 240
 agtccgccaa gtcgcccgc tacaacaaga agcccacat cacgtcccgg gagatccaga 300
 cctccgtccg cctcgtcctc cccggcgagc tcgccaagca cgccgtctct gagggcacca 360
 aggccgtcac caagttcacc tcatcctacg ctagtctgcc gtgtccgtga actgatgg 418

<210> 3453
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-D3
 <400> 3453

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 gactgtcaaa aatttgacag tcgcgctcat gttctggctc gggagttgag attattccaa 120
 tcacttggcc gtttgcaact tgggggcttg atatggttg accctttaag agatccaagg 180
 acaaaaagac tcacctgtta gtggcagttg acaagtttac caaatgggta gaagtagagc 240
 cagtcagtaa gtgtggtgcg gccacgacgg ttcagttcac caaaaaggtg atattacggg 300
 ttggctttcc acacagtatt ataactgata atggtactaa tctgtcaaag ggtgagatgg 360
 agtaattttg ccaacatgag cacatccggc ttgatgtagc atcagtggtc ccccccaat 420
 ctaatggt 428

<210> 3454
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-D4
 <400> 3454

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 gtggtaaata tggtaaagt gaagttatca aagacaccac tgttggcata aaatcctatg 120
 caggtattgc tgcggagggt atcggaaca gagcgtctt gatggcaatg aattaccatg 180
 tcaatacatc caatagcgct ttgtgggac acatgccaat ggttttccac acctgacct 240
 agccgaaatt tttgcaccgt acttcggga tgtagggcg cgtttcatct tttgcttatt 300

ctgatagtat ttcaaccctt tttgtgggaa aagctgatat tggtagatg ttgggtatag 360
aagagccata gagggaaacct gacaaagaca ttttcggcag cacgacccat tctttgcat 419

<210> 3455
<211> 321
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-D7

<400> 3455

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gattactgtc cagtgtctcg tagtagaatt agtgatcgct gtttaggtaa tgggtgtcgat 120
gtagtaatgt tctgttctgc ttttaagaaaa atgtcagaaa tctctctgac ttgcagtaaa 180
gaaaaaaaaa aaaaaaaaaa aaaaagaagc atcaaaataa gtaagacaaa caaaaagaaa 240
taaccataca aaaaaaaaaa aaaaaattta cacacacaca taaggttaat gtcatttgtc 300
tgaaagatga atggggcaca a 321

<210> 3456
<211> 382
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-034-Q1-E1-E1

<400> 3456

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gagctcgtgc tgatccgccg cccaagcca tacngctgcg acgggtgcga agagatgggc 120
acctcctggt cctacaactg cgcgagtgct gacttcgata tgcacgcaa gtgcgcgctg 180
ggtgaggaga agaagggaga ggaggtgaat gggcaggagc atgccgctgc ccagctggg 240
tacgtgtgcg agggagacgt ctgcaggaag gcctaggtag cgttagcgtt gtgtgtgttc 300
cttgccagct gaagcgtgtc tgaatcatgt cctgtgtggt gtgatgataa ataaatcttg 360
catccgatga tttggcttgg ga 382

<210> 3457
<211> 397

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-E12
 <400> 3457

taattagtcg tattatTTTTg actaatattg agtccatgga ttatacacac tcccaacttt 60
 ccgcgtttgc gcaaccctc cgtagtgta catggcttcc tcacactttg agattgggta 120
 cacttctccg gggcatctaa acccgtgtt acgatacgct ctatcacaca taaacctcct 180
 tatatcttcc tcaaaacagc caccatacct acctattatg gcatttccac agccattccg 240
 agatataatg ccatgcaact tccatcatca tcatcatgac atacattact tttgtcatat 300
 tgccatcgca tgatcatgta attgacatcg tatttgtggc aaagccacca tgcattatTT 360
 ttcatacatg tcactcatga ttcactgcac catcccg 397

<210> 3458
 <211> 409
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-034-Q1-E1-E3
 <400> 3458

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 gacgaagtgg agtacaagag ggagcgccat gtgattgtcc gcaaggcttg agctgaactg 120
 aaccgatgga actaccatgg aaccctctgg ccatctgatg tgtgtgtata agtagtgctg 180
 aactgcagc ctgtttcctg aggaaatttg ttgcttcgtt gaaattgagt tgtagttgta 240
 ctacttaaag ctgtagctgt agccctgaat tatcttgtcg aactgaagat gtaccacagt 300
 aagttcattc atgaatcatt tgggcgttct gcagctgagc agagtatgcc taggaaactg 360
 aaaaaaaaaa aaaaaaaaaa aaaaagagaa agaaaggaaa aaaggaaag 409

<210> 3459
 <211> 404
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-034-Q1-E1-E4

<400> 3459
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ggtangggca tgtccagaaa caggaggccg cgatcagcat cagcatcgat caatcaactc 120
acgcattctt gtttcttcat caagacgcac cgtccgttgc attgcattgc atgcacggac 180
gaccctgcgt gcataactac cattcaaacc gcccgctccg tccgtcggcc tctccgac 240
cgtgtttctt ctctccagta atgggtgtac ctagaggcta tagggcattg gttttgttcc 300
gtggtggcca tgtaactagc aagacttacc taatgaagtc atatcaattc aagatTTTTg 360
ccatcaatgg cttaaaacag atgaagtcta tcgattgact tcca 404

<210> 3460
<211> 392
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-034-Q1-E1-F1
<400> 3460

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cagcaagcat gagctgcttg agagtgcgga tgacaaggca agaaaggaaa aaggctttta 120
tggtgatcgg gatcaatacc gcgttcagta gcaagaagcg ccgtgattct gtcagggaga 180
gatggatgcc tcaagatgag aaactcaaga aactggaaga ggaaaaggga gtcgtcattc 240
gatttatgat tgggcatagg gtttaaaatg tgagtatgat gtgtgtggag agattgtcat 300
ccatgctcag caccggcctg caagcaccgt cgtcttgatg gatgatgatg atttaatatg 360
caaggggctt ccacagctct ctgccatttg tg 392

<210> 3461
<211> 395
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-034-Q1-E1-F3
<400> 3461

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tggaacgtac ggtctcctcc tatgaagagc ttctcaccat tcggtacact cctaagcatg 120

tcttccacgc cttcccagaa ctccctcttg gtgttctcat tgtggcctac ttgcgggggca 180
 tacgcgctga taacattgag acccaagtcc tcatctacca gcttgaccaa cataatccga 240
 tcgccacgtc tcttgacgtc tacgactcta tacttgaggc tcttggtgag taaaatgcct 300
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 tccatcgctt tctgtattct ccatttggtt tcttg 395

<210> 3462
 <211> 229
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-F4

<400> 3462
 gatcctcaca agcatggacc caacagcacc agcgtgtact cggggttgctg ctccaacagt 60
 tgatcatctc gaacatcgcg cactactaat aagggataaa ttcactgctg atgggtggcc 120
 ttgtccgcgt tgctatcaag tgaacaacct catatacaat ctactctaca cggttccagc 180
 tttcgagtgt actacacccg agatgtgcac tgctaagtgc cctgcgata 229

<210> 3463
 <211> 72
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-G11

<400> 3463
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 gtgcggtggt gt 72

<210> 3464
 <211> 382
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-034-Q1-E1-G12
 <400> 3464

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 tccacggcac atgatagcct gacgggtgcc aactttcttt ggacgtgaga atttgatcgt 120
 cctgtgctca gcaattcggc ataatgcacg atactgggtg tgcgctcgag ctacgtccac 180
 ctcttcactc tgggagttct ggaccaccac gccacatgc acaacacgcc agttcagcga 240
 gcaatcttgc gaggattgga gcttggaag acttggtcga cgtacgtgcg tgcttgccg 300
 acttggaactc gatggcgtgt gtggctggcg gcaaacagg cagaagacgt gcctgacctg 360
 gaaggangat gccgtcgtct cg 382

<210> 3465
 <211> 328
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-G2
 <400> 3465

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 gtcggtcaag agcttcatga ccgtgtcttg tgcagtgtg ggttcttctg tcgaggacga 120
 gtaccagccg cggggatccg ttgtacttca aataacacta cccgttgtaa attgactcct 180
 ggccaatgta tggatcaata tccagtgggt tgtctgtcat gacaacaata gagcaatcct 240
 tgaagtacaa acaaagtctt cggagggttc catcttgatc aactgggggt tcacctatct 300
 gataatcctt cttatactt atatgtga 328

<210> 3466
 <211> 436
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-G4
 <400> 3466

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 gtccgagtgg atagtatatc tctatgaaat ttacctagac cgacatgttg tgtggacccc 180
 atgcttcatg atatttcgac ccttcgtggg cctacctgtt atgtgtaatg ccaacattat 240

ctggccagca tattccatgt gctgacccat ttcgggctgc aacatatcat gttgcagact 300
 tttcagacga agagtaaggt gcgctagggt gttgtcatgc actcagctat gccgttggag 360
 ttgatggact cgctttatct tccaagtctt ccgttggtat cttgtttaga tggccttaag 420
 ccatatttac tgtaat 436

<210> 3467
 <211> 298
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-H1
 <400> 3467

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 ggtcagtctg tggatctcaa ctccagtgcg ttcctttttg atggtcgtac gtcctgtggt 180
 aagcagaccc ctgatgagct tgagatggag gaaggcgacg agatcgacgc catgcttcac 240
 gagaccggag ggtgctttcc tggcccttag agagagcttg ctgcagcctg actgttct 298

<210> 3468
 <211> 396
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-H10
 <400> 3468

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 atagaatctt actactcttg agcaactcca aaagcggcca ccgaagatct ttattggatt 180
 tgtttttcat caccagcacg tcaaggtgaa agatgtgcag gttccgtggg tcctctttgt 240
 tttcactgac atgtgggacc gcatgtgagc aaacagacga tgggctccgc gcatccgctg 300
 gctggctgag aagagagata gaggagggt gagcacggac tccaggaaat ttgttctgcg 360
 taaccaacac cttgatattc gcgtgtgggt gtttcg 396

<210> 3469

<211> 415
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-H11

<400> 3469

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gatatgaagc ttgtgccttt gttaactggc tggatgaaga atggcatggc atggctcgga 180
gtgttatcac caagtcaca gaagataacg taaagctaaa gaagaaacct gctgatttga 240
aatgtacaat cagtacgatg aagcaagaaa taatcaatca taggcaaccg atgaaagcag 300
agataagaag gaactagcat gtgtagttgt ggttgtcgca ttagccatgt tctatgcgct 360
gtttgcaatg atgattaggg gttttgtttg acagtattgc tgaagcacat ctaga 415

<210> 3470
<211> 370
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-H12

<400> 3470

cgacgggaca aatgagctcg tgtgcgggcca gaaagtcctc aacaccggat ccccatcac 60
tgtgcctgtt gggagggcca cccttgagc tatcattaac gttattggtg agccaattga 120
ccacaagggt gacataaaga cacacgactt ccttctatt catcgtgagg cccctgcttt 180
tggttagcaa gccacagagc agcaaattct tggtactgga attaagggtg tggatttgct 240
tgcaccttac caaaggggtg gcaaaattgg tctcttcggt ggtgcaggag tgggtaaaac 300
tggtcttatg atggagttga tcaacaatgt tgccaaggcc catggtggtt tctctgtttt 360
cgctggtgtc 370

<210> 3471
<211> 409
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-H3

<400> 3471

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gcaggtgcac cccgacatcg gcatctctc caaggccatg tccatcatga actccttcat 120
caacgacatc ttcgagaagc tcgccggcga ggccgccaag ctgcccgtc acaacaagaa 180
gcccacgatc acctccccggg agatccagac ctctgtcagc ctggtcctcc ccggggagct 240
cgccaagcac gccgtctccg agggcaccaa ggccgtcacc aagttcacct cctcttagat 300
tccgttgctt gtatctagta ccagatgtgg ttgttcactc tggttatgcc caagtagacg 360
tagtgctagt gctggatggg agttgctgaa tgcttaccga tgettctgt 409

<210> 3472

<211> 406

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-H4

<400> 3472

aattccgggt cgacggatga aaaaaaccac caaaaacatc aaggtcacca agccccgcgc 60
aaaccattac cccaaggatt acaatcccaa gaacaaggat ttgggtaacc ttaaccttaa 120
ggccccgata aaggttggtt ttatgtcagt cccgaggcaa ctgccgtttg tgtcaaaatc 180
agaggtaaca atgccatgca cccaaagacc aagaagatct tgcagctgtt gcgtttgagg 240
cagatattca atggagtgtt cctgaagggt acaaagcca ccatcaacat gctccgcaag 300
gtcgagccat atgttgcata tgggtaccg aacctgaaga gtgtgaggga gttgatctac 360
aagagaagtt atggcaagct caacaagcaa aggattcctc tgacca 406

<210> 3473

<211> 374

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-034-Q1-E1-H6

<400> 3473

gacggggggt gtcattgggt atgggtatcct agatagggtc atgaccctac cttaggtaca 60
taacctcatc attagcccc gaatggatcg aggttcgagt gaggaaggag ttgttggttt 120

tctccgacct atttcccgtg ctttgattat gtcgtatcct ggatcagcga tttttctttt 180
 tggcgttggc atcaactttt ctttcagtcg ccttgatcca ttcctttctt ctgtcgagtg 240
 aacttttgaa ctttagtgaa cttccgagtg acggatcgta ggaaagatat cgtctgacag 300
 attgatctgc cgtttagcgga ttttgtggga tccgaatttt gggaagcgca tgaaacgggg 360
 cggaccgcgg tact 374

<210> 3474
 <211> 269
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-034-Q1-E1-H9
 <400> 3474

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 ttcgtcttgt aaatgagagg cctaacaatga agactgtctg cgacgatttg tgcgccagaa 120
 gagcgtgagc ttccccgcgt tttttctttc tttcatcagt tcaccagtgt acatgtatcc 180
 gatttctctc gtcgtcgtcg tcgtgggtgca tcccaaattct tttttctgtg gggtttccag 240
 agcctttagt gtagggtttg ttcgactgg 269

<210> 3475
 <211> 175
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-A10
 <400> 3475

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 accaataatc cggggttgga tgcaatgggt ctaaccaatg tgcagcgggg ccccttcaaa 120
 gacataacga ccaacacacg agttacctca tgtgccaccg gtttggaatg atggc 175

<210> 3476
 <211> 381
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-A11

<400> 3476

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caacgacaag atcagcggct actgtcacgg tcaactgcaag aatgacggcg agcacaatga 120
gaagaatgcc atggagacgc tcagggacaa ctaatcatgg ctgatggggc atagtgcga 180
caatggatac tgtatcatca gtagatttat cgactgctac tgagccagtt ctggtcgcgt 240
tcacttcagg cgatatctgt acccttggtg tatcgtgtct tgtgctaaca tatttatgta 300
atgcttgcaa tgtcgcatgg atcatgtagt ctttcagcac cctgccatgc atggcgcctg 360
tgataccaac gttaaagaat t 381

<210> 3477

<211> 420

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-A4

<400> 3477

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tgatcaatat gtcacgtgtc aatggctttg gagttgagct ttctagtttc aattgatcag 120
atgcgacgat agatcacgcg tgttgacagt gtcctaggaa gcgtttgtcc gcagttgtcg 180
atcgatctca cattcggaac tcgaggctga aactctttgg cttcgggtccg gtccgaagat 240
gcgctcgtgc ctcaaattat gggcacactc catgttgtag ttgcagctgt tgctattggt 300
gacaacatca aactaacac gtacgtgtat acccttagag catgttaagg accgcacaca 360
aggaaatgcc tccttattac gcacaaaata atgattcctc caactgaaaa tctgggaacc 420

<210> 3478

<211> 281

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-A7

<400> 3478

tcgacggggg ccactaggtc tacaacgcca tttgtcggct gtgtcctaaa attgtcaacg 60
ctcttataaa agtttacaga gggagtgta gacgtcttgg cagttcacat tgtactgcca 120

tgacctcaaa tatttatgag cagactgagt attatttagc tctaccttgg gttgccgatc 180
 aggtccggaa tttctactca cttgtttaga cactatgtta cagtaggttc tactacaagg 240
 ttctgcccac acatatctgg ttgcaaacag attggaaatt t 281

<210> 3479
 <211> 393
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-A9
 <400> 3479

aattggtcgg agcaacaaga ccaaacaaaa ctccaaaaca accaattaaa aaaccaacat 60
 tttgaacaat acccaattag gttgaaaaaa acatgcaaaa agaccttgca aagatggagc 120
 agataggggtg ggaaagattg tatgtatgtg gatgagagag taagagacaa acctaacgag 180
 acaggggggg ggagatatag agagaggaag agagagtaag aagttagggtc tgtgagaaag 240
 atggagacat gtaatatact tgagatgcgt gtgcatccag attttgtata cgtggaacga 300
 gaagagacaa catgtttgat gagagagctg gaaaaacatg gacgagacgg gaaggatctc 360
 gcggggttgag ggattgataa ttttgtgtgg ggg 393

<210> 3480
 <211> 194
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-B10
 <400> 3480

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 accgcaaagt gcgaaggaca cattcacctg gatcaccttg ttgcatcttt ggtgcaatcc 120
 ctgcccaact atttatatgt tgatccccgg ggtcgaaact tggtgcagaa gcctcctcaa 180
 agtcggtttt tccc 194

<210> 3481
 <211> 402
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-B11

<400> 3481

tcgcggaccg gaaaattgtg ctcaagtggg agaagaagaa ttacatagaa tgcttggaat 60
caaatatgtg aacgatgaac atgattgcaa tgttgtagt atgaattcct tgaatatcaa 120
tgatgctaata gatatgcaaa gccacaagct tggggaagtt atgtttgatg aatatgatata 180
ttttagtccc ccaagttttg atgagaaaat ttactatgat gaaagcatgc ctctatctta 240
tgatgattat tgtgatgaca cgtatgcttt aaagaataat gataaccatg aaacatgtca 300
tcttgacctt aaatttcaat cacatgatag ttattttggt gagtttgctg ccactactat 360
tcatgagaag aattttgctc atgttgagag tagtaaattt tc 402

<210> 3482

<211> 174

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-B12

<400> 3482

tgggggtcaaa ccgtaacctg gtgtcgaagg cctcctttga agccaaaagg aataaagacc 60
gggttgccac taacctttgg gttaatggca atgattttta ggacaaccat ggcagttaac 120
atgggcctgg cgggttaacgg acaaaaaagc cattgacgca cccattccat ttg 174

<210> 3483

<211> 142

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-B4

<400> 3483

cataagatgg atcaatgccc ggctgcaggt aactcggag acggatctga caccgagtg 60
gcagacattc tattgccgta gacaacggtc tgtgacggat acttcataag ctgtcatttc 120
ctatcaaccc tctgaaccag ta 142

<210> 3484

<211> 349

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-B5

<400> 3484

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gaggatatga gatgcagatg gcacacaatg tactgcggga catacaggtt tgtgatgggt   120
acttggttaag ctgacatttg cgtatactcc ccggcaacag tgccagaaat ccttcttgct   180
acctcatgag cactgcattg gttttccctt caagatgaaa cggatgatgca ccaaaatagc   240
gtaagtattt ccctcaattt ttgagaacca atgtatcaat ccactaggag gccacgcaca   300
agtccctcgc acctacacat acaaataaaa tcctcgcaat caatgcaat                 349
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<210> 3485

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-B7

<400> 3485

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tacaaattgt ttattttgcc taattttggt agaattttta aagtatcata agtatggtga   120
atgttcaaat tattacagac tgttctgttt tagacagatt ctgtttttga tgcatagttt   180
gcttgttttg atgaaactgt caatttatat cagtggatta agccatgaaa aggttatact   240
acagtagaaa caatgcaaaa acaaaatatg aattggtttg caacagtact tagagtagtg   300
atttgcttca ttacactaac ggatcttacc gagttttctg ttgaagtttt gtgtggatga   360
agtgttggtg gattgagaag gtttcgatgt gagaagaagg a                        401
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<210> 3486

<211> 461

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-B8

<400> 3486

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atctgaactt atcacaagca aatacaactg ctaaaagctc tttttcagta gtggcataat 120
 ttctttgagc attgtctaca gtcttactag cataatgaat aacatttaac ttcttatcaa 180
 ctctttgacc tagaacaaca cctacagcat aatcactagc atcacacata atttcaaaag 240
 gtaaattcca atcgggtggc tgaacaatag gtgcagagac taatgctttc ttaagtattt 300
 caaatgcttc tacacaatca tcatcaaaga caaatggtat atatTTTTTgc aataaattag 360
 tcaaaggccg agagattttt gagaagtcct taatgaacct cctgtaaaat tcggcgcttg 420
 acaaaggaaa attcttatac ctttgatgtc cttgggacat g 461

<210> 3487
 <211> 336
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-C11
 <400> 3487

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 aaaaaaagg gaaccagtta aattgaaggc aacaaccaga gtggcaaacc tgtgtaatgc 120
 ccagagctcg tctctctcgg gtcaaagatc cacagtctgc tcgcgacggc gagctagctc 180
 agctcagctc gcgctctagc tccatgcatg cttggatcga tgcgctggtg tttactgcat 240
 tttggttcgc atttcgctta tgttgtact atgatgagat gatgttcgtg agattaaact 300
 ctgtttggtg ctcccgtcgt gagctgtatg atgatg 336

<210> 3488
 <211> 121
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-C2
 <400> 3488

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 acctggtgat accccatccc atgagcggtt tacaagttaa tttaacctct tggcttgcta 120
 a 121

<210> 3489

<211> 394
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-D1

<400> 3489

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gggggtgacg aaggggaagg taggggggagc catggccttag ggacgcgctt gtctgaaatg 120
tagggtaagt taccagcgta cccccaccgg ttttgacacc gcgacgtcga gccggcattt 180
ctggctgagg ggtcgaaggg gaatttcgcy tgtctgggct gcgggaccaa tttcgatga 240
ggagggagtt ttcgtgcgcy tcgaaatttc ggggtaacaa ggcgcggcgc gggttgaaga 300
ggcgggagtt tcaaagcaga tgagacaaaa gatactcgag cttgaaaatt ttgggataac 360
aaggcgcgga ttccttggtc ggcagaacaa actt 394

<210> 3490
<211> 305
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-D11

<400> 3490

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tcaaattggag gaatcattat tttgcgcgta aagtcaacgg ccgatggatg tcgttcggtg 120
gccacgttga caaggccgcy ccgatagcac catggagggtg gacgacggcy aggcctaaga 180
atggaactac acggagccgg ggaagactcg gcaactggtt cccatgcggt ggggagtacg 240
aaggtttaca ggtccagctg ccgtcgcccg aaaataacat gaggtgtggg tgagtagatg 300
aatgg 305

<210> 3491
<211> 298
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-D12

<400> 3491

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aagggcacca tggcgaaaaa gggcttgga acttacaaaa tctacatctt catggtgctg 120
aagcaggtgc accctgacat cggcatctcc tccaaggcca tgtccatcat gaactccttc 180
atcaacgaca tcttcgagaa gctcgcccgg gattccgcca agctggcccg ctacaacatg 240
aagcccacca tcacctctcg ggagatccag acctccttcc gcctcgctct ccccgggg 298

<210> 3492

<211> 133

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-D2

<400> 3492

gatgtggtcc aaaaacacaa tgggtgggaaa gggttccct ttggaaacca attttgccaa 60
attaacaact tccttaattt tcaatccaag gaagttaaga aattccaaac cctccaaatt 120
ccggcccaag ctt 133

<210> 3493

<211> 397

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-D3

<400> 3493

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gagtggcgct gatggtgaag gtaccaccag cgctatctc cttgatggac accttcttgg 120
tctcaggtgg agctgccatt gccttcttcc gcttgccggt ggagctcgac ggtgcgtcct 180
cgacggtagc gcagcactcc gaagaggtgc gcttgccgga gtgggcatca gagctcttgt 240
cggacttggc cttcttcttc cccccgggag cttcagcggc aagtatcttg cgttctgctg 300
cggctgctgc ttcccggtag atcttgctcg cacagataag agcatccttc ttgtcgccag 360
ggacagagat gacacttatt gggcctggca ttttcag 397

<210> 3494

<211> 291

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-D4

<400> 3494

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gtcgagtttg gagaggagaa agcttaagta atgtggctcg ggcatttcat cgaacacctc 120
atgtgcatag gaggtgagct agagcaccac aaagccctcc cccgccaacc agaaaaaac 180
agagcagtgg aatgctttgc tcgcgggcga ggggtatata tagccacctc attggtcccg 240
gttcgtagct ggaaccggga ccaaattggtc ccggtttcag ctacgaaccg g 291

<210> 3495

<211> 334

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-035-Q1-E1-D9

<400> 3495

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cagtgcattt ggctgcaagc caaagaagtt gatctcaaac agaaattact tgcagctagc 180
agctccctca aattcccaaa atgcagatct ttatgggaag ttgaccgtct gcagagcaga 240
aagtgaagat tctaaaggcg ggggaggatt cttgactgga tttctcatan ggggagcagt 300
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<210> 3496

<211> 393

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-E12

<400> 3496

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ccaaccaaac cccttccggc ggaaggattt aaaaaaçaat ggaaacccaa caattcataa 120
gccaaagttg ggggtgaaca atttaactac ccgccttggc caccgtgttg ggaggatgat 180

acaatctctt ttccctcaag acccaaattt ccgtggccgc cgagttgtga ccttccacaa 240
 tcagcgagac tatatatattt tccgtcatca caggtacatc tttgaggaga aagaaaagaa 300
 gatcgtttca aaggacaaga aatcgaaggg tgaaacgaaa actgagaagc aaataaactg 360
 ccgccttcaa gaatgccgcc ctcggttcac cct 393

<210> 3497
 <211> 405
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-E2
 <400> 3497

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 ctcatgaccc gcttttgccg aggagaggac agctggttgg caagatgtag caccagcgac 180
 ctgagtacat ccgaaactag ggatggaaac ggaaaactgc gacgcaacaa ggatcgtcgc 240
 cggactaagg aaaacagtcc gaagagcacg acagtcaacg ccggattcaa aagtcacga 300
 cagaatcaga aaaagctgcc cctccagcat aacagggacg agctatccaa cctaaacaaa 360
 atcttggaca ggatatgtca aatacacagt aatcccgga aacct 405

<210> 3498
 <211> 398
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-E4
 <400> 3498

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 ggattgcgat aaatgatgaa ataaatttgg ttggataatt ttgaggagtg tcttatcata 180
 cctcgcgtgc tctgcctat tatgctttgg ttaaattttt tccttttcac gataatacgt 240
 ttctcattta tatcataagc gtcgtagtac aagtcacgta tacatccacc taataaaact 300
 gaaaaaactg cagaacacta gtttttaggt aaaggaagac cagccaatta caatcaagac 360

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398

<210> 3499

<211> 340

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-E6

<400> 3499

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ccaaggaggc cggcggcgag gggaacacga cgggcacgaa gaagggcagc aaggccaaga 120

agggcgtgga gacgtacaag atctacatct tcaatgtgct caagcaagtg caccgggaca 180

tccgcatctc ctccaaggcc atgtccatca ttaactcctt catcaacgac atcttcgaga 240

agctcgccgg ggagtcggcc aagctcgccc gctacaacaa gaatccgaac cactcacgtc 300

ccgggaatat ccagacctcc agttcgccct cctcttcccc 340

<210> 3500

<211> 375

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

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<400> 3500

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ggcggcgagg ggaagacgag gggccggaag aagggcagca aggccaagaa gggcgtggag 120

acgtacaaga tctacatctt caaggtgctc aagcaggtgc acccggacgt cggcatctcc 180

tccaaggcca tgtccatcat gaactccttc atcaacgaca tcttcgagaa gctcgccggc 240

gagtcggcca agctggcgcg atacaacaag aagcccacca tcacgtcccg ggagatccag 300

acctccgtcc gctcgtcct cncggcgag ctgcgaagc acgcgtctc cgagggcacc 360

aaagccgtca ccaag 375

<210> 3501

<211> 224

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-035-Q1-E1-F10

<400> 3501

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cgtttacctc aggatatcaa tgggattaac taggataagt ttaggagcg gccacctcat 120
gaggtaaacc ggcctttcaa gtcaaacgat tactttcttc agaacaagga acttttttac 180
aagacctcct ttcggtgtgc cattgaaaat tattaccgt agga 224

<210> 3502

<211> 336

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-035-Q1-E1-F11

<400> 3502

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ccattcacga acggacttga aggcattggg tgtgcccccc tggccggaca ttggcaagaa 120
tcattccggc tgcacttgca acggaagggt cacaccagtt tggggctcca ggatagggga 180
cggttcagga acaataggat gataaatccc acccctgaat gatacagttg ccctgctgaa 240
tggccggtaa aactgcagta atacttctgt tacacatgtc attaactg cttataattc 300
ctactacttg ggatgtaacg ataggacatc atggggg 336

<210> 3503

<211> 342

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-035-Q1-E1-F12

<400> 3503

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cctccaccgt cgagaggctc tacgcctggg ataagaagct gtttctcgag gtcaagaact 120
acgacggaca taagcaggag catgacagga acgtggggct gctgaggaag caggaggtga 180
ggggcggtgga ctacctcaag atggagaaga acaggatgga gatggagagc ctcgagtcca 240

atatgctggg ggccacccag tccatcgaca ccaccacctc cgagattatc acgctcagag 300
aatccgagct gttccctcag ctacttgagc tgggtgctgg ct 342

<210> 3504
<211> 406
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-035-Q1-E1-F2

<400> 3504

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gaggagcaaa gatgggcca aagcaaggc agacttgaaa tcaatgggca ttangcagga 120
gcttcatgct aatgatgatg ataatgatga tgatgatgat gatgaggcga agcaggacac 180
agaaactcct cgcaaaggca aaaaggctaa gaataccgga aatgactacc ctcccgcgtc 240
cttactcta agtcatgagg agatcgagca gtttttcacc tgctatcggg gaaaccgatc 300
cacgaacacc tatgggacca gcggaccgag cccctttcgg ttggggggga gcggagatcg 360
catgaagagc ggatcgaggc gaagcacacg agcagtttac ccagct 406

<210> 3505
<211> 446
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-F3

<400> 3505

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atggaggacg atcaacctga actgaaatct gaaaccaagg cactggagga catacatgaa 120
gaagaagaag aagggtgcaga gttattgaaa tgataaagag tcttgtgttc ttgggcaggt 180
agatcttgtg gttttactct ctggtggatt gagtttgtca acatctggtt gaaatgtatt 240
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atctgtcctg ccgtaggaca ccaccaggat tcaactgctgt atggtcaaac agtggtgtat 360
ggaaatgact gcattagtgt gcactcgatg ttaaaaaaaaa aaaaaagaag gaagggagag 420
gggagagagg agggggggga ggagag 446

<210> 3506
 <211> 386
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-035-Q1-E1-F4

 <400> 3506

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 gataatagga ttatatttcg cacttgccag ctggaagatg gtgatatcgt ttgttttcaa 180
 atatcgccaa agccagatac tgctgaccac tttagatacc ctgatgtcac atcgtttctg 240
 gtgtatatac gtaacagaca ggttgtcgac ttccggctgt tggataatcc caaggaggat 300
 gatttttggc tatagatgtc aaagattttc acgtacgatg aagttgtaca aaaagtcgct 360
 caacagcttg gtgttgatga cccatc 386

<210> 3507
 <211> 395
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-035-Q1-E1-G1

 <400> 3507

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 cacgcgagta tcaagtgtcg tgtaggacaa ccaccgactg catgtggcca aaacatttat 180
 gtatgaaagg gttgtgtaat gttttaaata acgatttcac gactctgatg tggcatcaac 240
 cggcctaaca aaacggccaa ccacacggtg gtcacaact cgtagtgtac tgcgagccac 300
 ccgccacccc cagacgcaca caccacaca cacaccgga atccaccgca actacgatgt 360
 atgttaattt aattatcccg cggatgaacat acatg 395

<210> 3508
 <211> 261
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-G11

<400> 3508

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catggtgaag gtttgctagt caaggggtggg cagtggcaga agggatatga ggcaggggaag 120
aacaagatca agaaaaagaa tatacagtgt cacaagtgtg agcagtgggg acatatgaga 180
aaggactgtc cagaactcaa tgggtggggca agtgctaata aggcaactca tggatgatgac 240
tcagatagca gtagtgatgt t 261

<210> 3509

<211> 386

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-G3

<400> 3509

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cgagctgcag gtcaccatcg acaagtttga ggacctgaag aagaaggagg aggccgcctc 120
cgcaagctcc tccaccccag gatcatcata aacaagcacg cccttaactt tgaaactagc 180
tactgctgct ctctcccagg accatgggtt cggtttgtat ttgataataa tgggtgctgt 240
tagttagatg gagcattttc attcatggca tggatggagc ttggagttga tgatgctttt 300
tgtttgtgtg aatcgtaact gcggtgtctg gaaattatga tatgatattg cctccgcttc 360
agaatataag gcgtactggt tttgcc 386

<210> 3510

<211> 397

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-G8

<400> 3510

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gagtttcgcc ggctgaagca agctgcagct ctgctcatct gctttccttt cttgctttgt 120
actgctcctt gctactccct ccgtcccaaa gtaaattgtct cgactttgta ttagcattag 180

tctaaaattg tactaagctt gagacactta ttttgtgacg gagggagtaa ttaacagctg 240
 ttaacactga gagcaggaat gaatggatgg tgcttgcat agttacctgg cacatcaagg 300
 agggaagctt ggaacttggc ctggcactaa catgtatggt catgccacac tagacttgtc 360
 agttcttctc actggtttct ctttccctcc gctgttg 397

<210> 3511
 <211> 312
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-035-Q1-E1-H11
 <400> 3511

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 acaagtttag tcagcagtac aaagctacca atggcgccga tttcgtcaac aaggagatcc 120
 tcaatggaga caaggttggc aaaatggaga tttgggaaaa ccgcgggcaa ggagagatcc 180
 aagagtcctg ggtgtcgcat tctacagaag gggcagattg ttgtgtgcnt tgttatgatg 240
 tcaatgttaa caggtcaatt gatacgtca acacatggca tgatgagttc ctcaatcagg 300
 ctagcccctc ag 312

<210> 3512
 <211> 376
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-035-Q1-E1-H2
 <400> 3512

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 aaccctcaac ctgcccggtc ccttcccctt aaagttcaac ggcgcccccc cctggaatcc 120
 caagcatcca agccaagaaa aggaaaagga aaaaattgaa gattgagaag gaaggacggc 180
 aagttagtgt cggggattat taccaaccaa aaggacctac aaaaaatctc gacttgtggt 240
 tatgttttct gggactgatt tccaggcggg tcctttgatg taatatacat tcaggatttg 300
 gatgatcata tctctttaag tgctctcagt ttttacagga agtcatcgat ttcaaaaaaa 360

aaaaaaaaag cggccg

376

<210> 3513
<211> 402
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-H4

<400> 3513

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tgatggcact gaggttttct tccgcatcaa gagatccaca cagctgaaga agctgatgaa 120
cgcttactgc gaccgtcagt ctgtggatct caactccatt gctttccttt ttgatggtcg 180
taggctccgt ggtgagcaga cccctgatga gcttgagatg gaggaaggcg acgagatcga 240
cgccatgctt caccagaccg gaggggtgctt tcctggccct tagaaggagc ttgctgcagc 300
ctggctgttc tatgtcgtat gctaccttta gaactagagt aaaatgtaag aagtgaaaga 360
acttgtgagg ctatggttct gtgccatagc ctgaaggggg gt 402

<210> 3514
<211> 257
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-035-Q1-E1-H5

<400> 3514

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acgtcgctga tgaacgtata agttcagatc aagtttaatc agcatgtaca gttcgaccat 120
tgcattgcga gtttcgtcac caacgaagtc ctcatgaag agaggcttgt cacattgcaa 180
atctgggaca ccgccgggca tgagagattc cagagtcttg gtgtcgcatt caacagaatg 240
gcagattatt gtgtgct 257

<210> 3515
<211> 420
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-035-Q1-E1-H8

<400> 3515

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taggcgcaac ccctagtatc tgaactagtg tgctgtaaac acctgatgga tacgaaccta 120
ttcattgcat aatgcggaaa aaatcgctaa agatttgaaa cctccgaaca gctgaccgat 180
tcacgccgca tcatgatagt cagttttcgg ctttctctac taagggtgctc atccggataa 240
actaggtcac aatcgtagta gttctccctt tactacccta gccgatattg cggaatgtat 300
ggtagtaagc acaggagccg ggcaacccaa ctattgacca aagacatgat tcggagccaa 360
tgcatataat gccaaattcg tgggtgggcaa ctatactgta aaaagtgttc ggactttttg 420

<210> 3516

<211> 372

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-A11

<400> 3516

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agggacgaag tggagtacaa gagggagcgc catgtgattg tccgcaaggc ttgagctgaa 120
ccgaaatgat ggaactacca tggaaaccct ctggccatct gatgtgtgtg tataagtagt 180
gctgacactg cagcctgttt cctgaggaaa tttgttgctg cgttgaaatt gagttgtagt 240
tgtactactt taagctgtag ctgtagccct aaattatctt gtgtcgaact gaagatgtac 300
cacagtaagt tcattcatga ttgcaacatt tggggcgttct gcagctgagc agagttaatg 360
cctaggaaac cg 372

<210> 3517

<211> 397

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-036-Q1-E1-A12

<400> 3517

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ccaagaccct tggcaacttc gtcaaggcta cctttgactg cctgatgaag acctatggat 120
 tcctcactcc tgacttctgg agggagacaa ccttcaccaa ggcgccgtac caggagttca 180
 ccgacatctt ggcgaagccg accaaggccc tgatgcttga tgcaccagct gagaagatag 240
 aagcttagga tgaagggttt ttactagctg ggagctgtct gttgcacttt gctttattat 300
 agtcgagaac cagggtgtctt tgaattgtgc tacttgtgga agtctctgtt tgctgtcaaa 360
 gttttggatt atgggtgcaat gctactctng tattgtc 397

<210> 3518
 <211> 403
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-B4

<400> 3518

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 cctatccttg ttctctatcc tactatcata gacctttgtc aagttattac cccgccctct 180
 tgaatttgca ccttatctgt gaggtgaat ggtgttaacg ttttggattg tctcgatgag 240
 ttgaattata atgaatggta cttatgttgg ttccaagcac atgaatacat ggtccactga 300
 gtaatataaa gtccacgcga catcgcataa attccatata tacattatag aacaatgatg 360
 gctactttat gtctatacaa gtttatgcat gtcccatgca atc 403

<210> 3519
 <211> 376
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-B5

<400> 3519

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 ccattgcacc aaagaccaag aagatcttgc agctgttgcg tttgaggcag atattcaatg 180
 gagtgttcct gaaggttaac aaggccacca tcaacatgct ccgcaaggtc gagccatag 240

ttgcatctgg gtacccgaac ctgaagagtg tgagggagtt gatctacaag agaggttatg 300
gcaagctcaa caagcaaagg attccttctg acaacaacaa agtcattgac gaaggtcntg 360
gaaagcacia catcat 376

<210> 3520
<211> 418
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-036-Q1-E1-C1
<400> 3520

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acgcagctct ccatctccat cgccaacgaa ctccccatca ccaccacctc ccgctaccac 180
catggtgaat gatcccaagt cccaacgaga agaccgagaa cgaagctgca acgagagacc 240
atctccacga agaacacgca cgtacggagc gaatccattg gccctttccc ggcgtgctac 300
tccagctgca tgccgcccag acctggacca gctagctatc ttgactctcg aggcattgcat 360
gcacagttcg agtgctgaag atcttgaaag gccggaacct actacgacca tcattttc 418

<210> 3521
<211> 410
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-036-Q1-E1-C4
<400> 3521

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taagctcgtg gcgtgggtccg aatccgtggc tgacctcctc gatctggatc acaaagagtt 120
tgaaaggcct gattttcctc ggttcttctc aggagaaact ccgttggtgg gaagtgtgcc 180
ttatgccag tgttacggtg gacaccagtt tggttcatgg gctggtcagt tgggggatgg 240
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caagggtgct ggaaagactc cttacagccg atttgcagat ggctcgcgtg tcttgccgag 360
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<210> 3522
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
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<400> 3522

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ggttgctgca tgatagatcg taggatgggt gtgtatggct accccattga aattcaatcc 180
cttttcttca tggcactaag gtgtgctctt ctaatgctta aacatgacgc tgaagggaaa 240
gattttgtgg agcggattgc aactcgtctt catgctttaa gttatcacat gcggagttat 300
ttttggctag atttccagca gctaaatgat atttatcggtt acaagacgga agaataattct 360
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ttcatgc 427
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<210> 3523
 <211> 445
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-D11

<400> 3523

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tagaaattat tagtctctca tgcttcactt atattatatt gagagtctca tagaacagca 180
tggtattttc tatggttaat aatttggtcc tagaatgatg agcatccaag ttgggtataa 240
taaaaactat cataggaatt gaataggatg ttatgatcag tttgttgctt gataattggt 300
ttgagatata aaggtagtaa tggtagggtc atgctagtgg ataattatga aattgagaaa 360
tacttttggt gaagttggta agtcccgtag catgcacgta tgggtanaagt tgtgttaaaa 420
aattgttcac.gaggtgctct tttga 445
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<210> 3524
<211> 136
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-D8

<400> 3524

gggtcgacgg ggtacgctat aacaagtc atcatcatat tttcgatatca gcaagtcgtc 60
gagacacgga ttaacaacct gtcaatgacc acttccatgc acgtaggaaa tcgcccttaa 120
gtgtgaatga gaattt 136

<210> 3525
<211> 277
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-E10

<400> 3525

cgggtcgaca aggttagaaa tagtaaatat gcatagttgt atcgcgacct gaatgaatga 60
aataaacgaa ataacgctca tgttcaaaaa aaaaagagga aaacaaaaaa acagaaaatc 120
aaaaaagaca aaaaagacaa aaaaagaaaa aaaaaaaaca aagataaaaa aaaaaagggg 180
cggcccaaaa ggatcaaacc taagtaaccc gtgaaggga tgtcaaacc cctccaaaag 240
ggccacaaaa atcaattcaa cggccggccg tttaaaa 277

<210> 3526
<211> 445
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-036-Q1-E1-E12

<400> 3526

cgggtcgaca gggctaacaa aaaactgctc taaaagtctt gttgcccccg ttcatgtga 60
ctccttcgat cttgatgata tactcagctc cttccccgcc aaccgcacct ccttcccaat 120
gaaatatctt gggctgccgt tgtcaaccaa gaggtcaaaa acaatccatt ttcagcctct 180

cgaagataag attgctgctc aacttacccc ttggatgggc aagcatgttg cgcagccggg 240
acgggctgtg ttggtcaagt cggtcacac ggcaattgcc atttactact tgacggcgct 300
agacctacgg ctgaggttat gaagaagatc gactccctta ggcgtgccta tctttgggca 360
agttgtgaca aggtcacang tgtcaaatgc aagatcaatt gggaccaggt gtgcaaatca 420
aaagtgcctg gtgggttggg cattc 445

<210> 3527
<211> 357
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-036-Q1-E1-E2

<400> 3527

cttatgatgt caacaaaagg tcggagcttt gtggatggtg gcatgaagga gatagaagct 60
ggaggtagan gatacagaag aggggcaaat gatgatttca tggtttatgg acangacaac 120
tcaatggaca ggaggagctc cttggacccc cttgccgagg cgcattacaa gagaccact 180
cctctagagg aaaagaagaa tgtgcacagt atgggcgatg agtccttcat gatactgtt 240
nactnaact cacatgataa ccttggagca gccggccgta ctgccattga cattgatgcc 300
gagcttggtc caagtgttca gaaaacatca gatgctaagg ctggcgctga acttttc 357

<210> 3528
<211> 367
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-036-Q1-E1-E4

<400> 3528

cgggaacctc aacaagctca tctggatcag tgggatcaga agcgtgcccc gtacggttcg 60
cgtgatgatt gccgcagga ggaacgatca agaggacccc aaggaggagc tctactcact 120
tgtcacggtt gccgaagtgc ctgctgacgg tttgaacgtg ctgggaacca acgtcgtcga 180
tgacactgag tacactcatt tctttatcta catcgtaga atgagctgtt atttggaatt 240
gcaccagcat gcattttgta tccgcagac attttagagt atggaatata cggagctatc 300

tatttttcctt canaaataat gtacaaaatt gatgcagagg acaagtgtct ataaccttta 360
ctcgatt 367

<210> 3529
<211> 430
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-036-Q1-E1-F12

<400> 3529

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atggacgact tcagtctgtg ctgttgagg gggtagggag agtcgaagct tatttcagcg 120
ggatagcgag aaacacacag atcggactag ggcccaatgg tctgatggag gcgtgatact 180
cggcatcggg cggtgatgtt cggtgggtct ctgcagtagg ggtttgagtg gtgtgggtcg 240
cgatccagga gactcgaccg ggacagcaga ggctcgacgc ggctatagcg gcgaggcggtg 300
cggtaagcac aggacacagc gacaggccag gacactgggtg gtcagacatg tggtcggaca 360
aattgtgcan ggggtgctga agcagtgttg acgagtaacg gattcaagtt ggtgaacggg 420
tccaaccggt 430

<210> 3530
<211> 383
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-F2

<400> 3530

acggggacga ggaggccgag gacgagctag gagctgaata tctagtgcag ccgcgtggtc 60
gtgctgaaga tgaacagcat tccagtgact ttgatccgga acattctggg gatgggtgctg 120
aggatgagga tattgatgat gatgatgctg aggatagtga ggattctgtc aatccggatt 180
cctcagctac tatgaagacg tctgctgcag aggataagaa taattctgac ggtgatgatg 240
atggtgatga tgatgataat cctccatcag atcgatagtc aatttggttca tgctgatctg 300
gtaccatttc tgcttgccgc tagaatgaca atactcctct gggagaggat tggttggtaaa 360
tgctgtaaca ttaggacatc tgt 383

<210> 3531
 <211> 431
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-F3

<400> 3531

cgggtccgcc aacggccagc caaatcgacg gagaaggaat ggcttcaacc aggggagacg 60
 tangatggga gttcggcccc ggcgaactga tanggaggat agtgtacggc gaactgtcta 120
 tgtctcagac attgatcaac atgtcactga acagaaactt gctgagggtt tctcaaactg 180
 tgggtcaagtg gtagattgcc gtatctgtgg tgatccaaac tcagtgatgc gttttgcttt 240
 tatcgagtgc gctgatgatg tcgggtgcaag agcagcttta acgcttggtg gaaccattct 300
 tgggttttat cctgtcagag ttctgccatc taagactgct attttgcttg tgaaccccaa 360
 atttcttcct cgaacggagg atgagaaaga aatggtatca aggactgtgt actgtactaa 420
 catttgacaa a 431

<210> 3532
 <211> 391
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-036-Q1-E1-F4

<400> 3532

acagtgttct gagaccttca catcaaaca tgcaaggaaa cgaacgctcc gcaaccttgc 60
 cgaagtctac caagtagcaa caataaaccc atggagtgc acggtataa cttttaatgc 120
 cagtgcagaa cctaaattcc ggacagcccg agcaccagcc gcattggtcc tcagtccgat 180
 agtggacggc ttccgactta caaaggact catggatggc ggcagcggac tcaacctcat 240
 ctacaggaa accctgcgaa aaatggaaat tgactggagc cgcattgagt gaagcaacac 300
 aacctttagg ggaataatcc caagccggga agcgtggtgt tcaggaaaaa tcacactaga 360
 tgtggtgttc ggcacgccgg ataattacag a 391

<210> 3533

<211> 372
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-F5

<400> 3533

cggaacacac tatactgttt ctgacaaatt ctgttttacg tgtgttggtt gcttattttg 60
 atgaatctat ggctagtaaa atagttaga atccatagag aagttggaat acagtaggtt 120
 tgacaccaat ataaataaag aatgagttca ttacagtacc ttgaagtagt cttttgtttt 180
 ctttctctaa cggagctcac gagatttctg ttgagttttg tgttgtgaag ttttcaagtt 240
 ttgggtgaat tcttttgatg gattatggaa caaggagtgg caagagccta agcttgggga 300
 tgcccatggc accccaaga taatccaggg acacgaaaaa gtcaatgctt ggggaatccc 360
 cggaaggcat ct 372

<210> 3534
 <211> 414
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-G11

<400> 3534

tcgcggtcg acaggaaca ccccgcggg ccataagccc aaggccgaga agcggctgcc 60
 ggcgggcaag acggcgcca aggaggccgg cggcgagggc aagaccggg gccgcaagaa 120
 gggcagcaag gcgaagaagg gcgtggagac gtacaagatc tacatcttca aggtgctgaa 180
 gcaggtgcac cctgacatcg gcatctcctc caaggccatg tccatcatga actccttcat 240
 caacgacatc ttcgagaagc tcgccgggga gtccgccaag ctggcccgt acaacaagaa 300
 gccaccatc acctcccggg agatccagac ctccgtccgc ctggtcctcc ccggggagct 360
 cgccaagcac gccgtctccg aaggcaccaa agccgtcacc aagttcaact cctc 414

<210> 3535
 <211> 388
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-G4

<400> 3535

tgcgatcata ccagcactaa agcaccggat cccatcagaa ctccgaagtt aagcgtgctt 60
gggcgagagt agcactagga tgggtgacct cctgngaagt cctcgtgttg cattcctttt 120
ataattattt tttgcgcctt gtgagaaaca tgtcgcacgt gcgcgatata tatcaatccc 180
gttatattat gtttgacgtt tgcgatatgt ttaagctcga tgctcattgc tcgcgcgtct 240
tggggcggtt ttgtggcgcg aagagcgcgt tctgaaaggg gtggaaaaaa ctcgtgttgt 300
tgcggtatgg agggaggggt ggaaaccgtg gaaaactcgt ctccgtgatt gagcgggaga 360
gtaagtagta taggacatta tccattgt 388

<210> 3536

<211> 421

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-G6

<400> 3536

gacagatatg acgctcatcg ggcctggcat cttcagcatg ttgtatgcgt agtgagaggc 60
tgccatgaac ttggcgagtg ctggacggcc gagtatccca ttataaggca atggaaaatc 120
ggcaacgtca aaagtgactc tctcagtcct gaagttcacc tcgctgccaa atgttactgg 180
caacgtgacc ttccccctcg gcttgctcct tcccgggttg attccttgga atgtgccggt 240
ctcttcaagc tcgctgtcaa ggatctggag tttctggagt acagcggagg agatcagggt 300
caagccggcc ccgccatcaa ctagcatctt agtgaccttg aggttgcgga tagttggtga 360
aaccaacatc ggcaagcacc cgaccgcagt tgtgcgatca ggggtggctcct caatatcaaa 420
g 421

<210> 3537

<211> 395

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-G7

<400> 3537

tcaaccaatt tagttcagaa ttttttgagt tatataagta atctaaagtt tcagattact 60

acacactggt ctgtttttga cagattcgat tttctatgtg ttgtttgctt attttgatga 120
atctatgagt agtatcgaag ggtatgaacc atggagaagt tgtaatacag tagatattac 180
accaatatga atttagaatg agttcataac agtaccacaaa gtggtgattt attttcttat 240
actaatgaag cttacgagtt ttctgttgag ttttgtgtgt aagtttcatg tttggggtaa 300
agattcgatt gactatggaa taagaagtgg caagagccta agcttgggga tgcccaaggt 360
acccaaggt aatattagag gacaaccaag agact 395

<210> 3538
<211> 416
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-036-Q1-E1-G8
<400> 3538

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aaggagcgac tgttggggaa cgtagcatgc aattttaaaa aaattcctat gctcgcgcaa 120
gatttatcta ggagatgcat atcaactata ggaggagagt gtgtctacgt accctcgtag 180
accgaaagcg gaagcgtttg acaatgcgtt tgacttagtc gaacttcttc tcgttccgac 240
cgatcaagca ccgaacgtac gactccttcg agttctgcac atgttcagct cgatgacgtc 300
cctcaaactc ttgatccagc agagtgtcga ggaagtagat gagtttcgtc agcacgacgg 360
cgtggcgacg gtgatggtgc aatgatcccc gcaaggcttc gcctaagcac tacgag 416

<210> 3539
<211> 370
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-036-Q1-E1-H1
<400> 3539

caggtaacc agtttagttc agagtttggt gagttacata agtaatctaa agtttcagat 60
tactatatac tgttctgttt ttgacatatt cgactttcta tgtgttggtt gcttagattg 120
atgaatcgat gagtagtata gacgggtagg aaccatggag aagttgtaac acagtagata 180

ttacaccaat atgaatttag attgagttca taacagtatg aacagtgggtg attgatattc 240
 ggataactaat gatgcttagg aattttctgt tgagttttgt gttgtgaagt tttcagtttt 300
 tgggtaaaga ttcaattgac tatggaataa taagtgtcaa gagcctaagc ttggggatgc 360
 caagtgggtac 370

<210> 3540
 <211> 357
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-036-Q1-E1-H10
 <400> 3540

ctctaaactg agtcgtatga aatttcattt gagattatca tacatgtcta ttactattcc 60
 gctcgggcac atctcatgag ggtgttcctt actctcatgc tgtgtcttgt acacttttgc 120
 tattctggtg cagaggtcgt gatatttgat tgtttactga agatgttttc tgcgtggaca 180
 tcgcgagtga atatgtctct acggttacgt ctttaggtca ttagttaagc cgggtgttttg 240
 ttgcatgtct tggttttact gatcctagct cgtctgtaga ctagttaagt tcagtcttct 300
 gagtttcggt attagacgtg tgtctatcaa attcttttaa tctgccatca ccttttt 357

<210> 3541
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-036-Q1-E1-H11
 <400> 3541

tcgcgggtcg acacaatgca caagacatta tctcactaca ggatgggtact aactattata 60
 ccttgcattt ttaattcctt tgccccattt ccaatatagg gaagatattt atgcacatcc 120
 ttattttcag gcctttccaa accagttcac tgacgattac ctctcaaacc acctgtatgg 180
 tcaggaggcg aggaaggat tcatacaaca cccatgggtc aatattgaag tgttcctaaa 240
 gaggacgaag gatggacggt caatcatcca catgttggtca gcgtcctgng aacgggggtc 300
 nccagacttg cctgcctgtg gccacaacg tggattctcc agcggccctg tacgaaccat 360
 cttcnacagc aaacactcaa gaacctcgcg aagggccaaag cctcgcgagg cggacgacg 419

<210> 3542
 <211> 389
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-036-Q1-E1-H12

 <400> 3542

catgggagaa ggagaatgtg tccagtgggg ctcttgaggc tgcccgtatt gcttgcaata 60
 agtacatgac caagcatgca ggaaaggatg ccttccacct cagggtcagg gttcaccctg 120
 tccatgtgct ccgtatcaac aagatgcttt cgtgtgccgg ggctgatagg ctccagactg 180
 gtatgagggg tgcttttggg aagccgcagg gagtctgtgc ccgtgttgcc attgggcagg 240
 tcctcctttc tgtgcggtgc aagcccaaca atgccatcca tgccactgag gcccttcgtc 300
 gtgccaagtt caagttccct ggccgcaaaa agatcattga gagcaagaag tggggcttca 360
 ccaagttcaa ccgcaacgac tacctcaag 389

<210> 3543
 <211> 404
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-036-Q1-E1-H2

 <400> 3543

gaatgccaag accggtgata cagtgtcctc cgacgccaac ttgggttcct cccggaagca 60
 agaactggac caaaccaagc aaaaactgca aacgtgaaa gatcctcaaa aaaagggcca 120
 agattcctca aacaacctcc tccaaattaa gaagatgact tccgaaataa aacaactcaa 180
 ggatgctgca aatgcctcca aatccgaaac caagaagtta accggccaaa attaacaaaa 240
 caaaggcaac atccggaact ggctaaatga gatgtcttgg cagcaaagag gatggaagaa 300
 gctgcaagag cagctgaagc tcttgacta gctgagatca aggccctgct ctgcagtga 360
 gcctcagctc aagatctcca ggacacagat ggagtgagcc ttcc 404

<210> 3544
 <211> 378
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-H4

<400> 3544

ttttgcaatc tgaactaata aaaccagcaa ggtaactaaa gataaaattg accgtaaaca 60
atattgcaat gataggaaac aaggcatatg gttcatactt tctactagtgc aagttctctc 120
aacaataata acatagatag atcatataac aatccctcaa catgcaacaa agagtcactc 180
caaagccact aatagcggaa aacaaatgaa gagatcatgg tagggtagca aaccacctca 240
aagttgctct ttttgatcta tctattcaag agttcgtagt aaaataacat agagctattc 300
tttccactcg atctatcata gagttcatac tagaataaca ccttaagaca caaatcaatc 360
aaaaccctaa tgccacct 378

<210> 3545

<211> 392

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-H6

<400> 3545

aatgccagga cgggtggtac ctacagtgga accttgccag atggatgcaa attagcaatt 60
aagagattga agagatccag cctacagagg aaaaaggatt tcgactctga gatcagtaga 120
gttgcaaagc tctatcatcc taatttagtg gctgtcaaag gatgttggtta tgatcatggc 180
gaccgcttta ttgtctacga gtttggtgcc aatgggccgt tagatgtgtg gctgcatcag 240
attcccagag gagggcggag ccttgagtgg gcaacgagaa tgagagttgc cacaactctt 300
gcacagggga ttgcatttct gcatgacaag gtgaagcccc aggtactcca ccgtgatatc 360
cgtgcgagca acgtccttct cgacgaggaa tt 392

<210> 3546

<211> 399

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-036-Q1-E1-H8

<400> 3546

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tatattgtac gtatataatg tgaagaaacg agtggttagta ctataccaac taaaagatga 120
aatgtaagaa atactagtat gtacgtactg aagagttaaa gtaacgagaa gaaacataac 180
atagttctgc tgggggctca gcacaacaca cccctcaa ataaattaagc acacctgaaa 240
ttaaactttg caactattcc ggtagacact gcattagaac caccatgagc aacgacactg 300
ccaccttact cagagtcctc gtccacgtcc tcgacttcgt ccttgccct cttcctctag 360
gccgatactt ctttgcttga accgcacact tggctgttg 399

<210> 3547
<211> 126
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-036-Q1-E1-H9
<400> 3547

taccgggtcaa ancattcgcg ggtagacagg gaanggttat tcttattcct actgataatt 60
atcttttctga gattatccta ctcggaagtt acatattccc gtctgtcaca tagatataga 120
acgtgt 126

<210> 3548
<211> 407
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-037-Q1-E1-A10
<400> 3548

gccaaaccggc atcccaaaat acattctggc aacctggcac aaaaagggtca attaccaaaa 60
ttactgggca aggaggaacg gttttcccaa ggcccgaac aattttttga cggtaaaaaa 120
ccaatgataa caccaatatc agaaaaccaa gcaaattcca aggaaaagggt tgtattgatc 180
cgaggaaaag gacaaaagg aggtcccggg atgcctgaaa tgttgactcc aacaagtgc 240
ataatggggg ctggtcttgg gaaggagtgt gccctgctga cagatggtag attttctggg 300
gggtcgcattg gatttgttgt gggccacata tgtcctgaag cacaggaagg aggcccaatt 360
ggtcttgttg agaatggcga tacaatcacg atcgacgtcg ggaagaa 407

<210> 3549
<211> 179
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-037-Q1-E1-A11

<400> 3549

gaacctgagg ctggagggat aaagaattcc tcctgggtct gatgacaggg gaatgcagta 60
aacaccagaa gcatcanaac tatgatctgg aacagtatcc tgaataaact attttctgga 120
ttatgaatga attctgaagc atggggctat aagtgaatta tgtaacatgg attttgtac 179

<210> 3550
<211> 401
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-A6

<400> 3550

cgggtcgacg ggccacacga tctactgacg ctattatggc tgaagcagaa cttaccttaa 60
atgctcctgc tgatgttgac gcagatctac tgaaggatga tgatgatgct cagctactac 120
agcaagcact cgctatgtca atggatgagg gtgcttcagg agctgcagcc gtggctgatg 180
ctgctatggc agaagctgct gcagatgacc aggatttggc attggctctt caaatgtctg 240
tccaggatgc agaggcggct ggtcaatctg atatgagcaa agtgtttgaa gacagatcat 300
ttgtgacatc catccttaat tcgcttcctg gtgttgaccc caatgaccca tctgtgaaag 360
atctactggc atctttgcat ggccaacgag agcaagaaga g 401

<210> 3551
<211> 141
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-A9

<400> 3551

tccctccaaa tccccaacga agaataactc cggaacggca aaaattgccg gattcttgaa 60
aacaaacgcc tggaaccag tttaaaaggc aagccttcaa tcctccgttc caaaggatcg 120

tccatggccg gtcccaagga t

141

<210> 3552
<211> 402
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-037-Q1-E1-B1

<400> 3552

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ggagatccag acctccgtcc gcctcgctct ccccggggag ctogtcaagc acgccgtctc 120
cgagggcacc aaggccgtca ccaagtccac ctctccttag actgaagatg cgccgcttgt 180
tgtgccagat gtggctgtct gatgtatctc tgctgttgac tctgcttaac tgcaagtaga 240
agtagtggtg gtagttcgtg tggtagaaga ttgccaacgc tttgttggtc tcttggttgt 300
gagaactgaa cgtgttgctt ttgcaaaatg aaatctatct agaaaatggt gcggttgtgg 360
tattaanaaa aaagaanaaa aaaaaaaaaa aaaaagcggc cg 402

<210> 3553
<211> 401
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-B2

<400> 3553

cgggacactt cattccgatc cattctatat atacaactca ctagtactat tgaaaaaaaa 60
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaag aaactactaa 120
agaataaaac aataaaataa acatacataa aaaatcaaaa aaacttaaaa aatatcaaca 180
aaaaacgggg ccccccaaag gggtttaacc ttatcttgcc tgggaaggaa ttttaaattc 240
ccttcaatag gccccctaaa ttacatcccc cggccgccat tttaaatatt tttgacgggg 300
aaaaccccggt ttttccccac cttaactccc ttgacataaa atcccccttg ccaagtgggt 360
gttaatgcca aaaggcccc accgtttttc cttgcaaaaa t 401

<210> 3554

<211> 414
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-B3

 <400> 3554

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 tcaacttgta tttcagaaaa atgttcaagg tgtatatgaa aaatgttcaa cctgtatgcg 120
 aaaatatggt ccacatgtat tgaaaaataa aaaaaaaggg ggaaatgtat tagataaaat 180
 aaaaagataa accaatacat aacacgtgaa aaagaagaaa aaaaccacat gaaagattct 240
 agaaccagtt catacaactt tccccaatcc gttcctagaa gcgaaacgaa cgcatttatg 300
 ggtcaaccat taatggggagc gccggaggca agacaagctt atgtctcgtg atcataaccg 360
 agctttcttc cctatagaca ggtctactca atcagcccca taccaatggt cgta 414

<210> 3555
 <211> 407
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-B4

 <400> 3555

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 gtacatgatg atgaggaaga tcaaggcgaa gggcatgatc atgaagatga agatgccgga 120
 gcagacgacg atggaggctg ggtgcaggac ccccatattc aagagctgct tctcaagcag 180
 acggataacg caagagctgc cggccgagag aaagccaagc tggatcaact ggagatagac 240
 gcggttactc cattgtatga aggatgcagg cccgaggata cccgcctgga agtaacgctc 300
 atggatctga agatgaagggt aaaacacaaa atgaccgacg catgctttga cgagaacatg 360
 tcattctggc acgaacgtct tcccaagggg aacaagtgcc cgaccag 407

<210> 3556
 <211> 281
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-037-Q1-E1-B9

<400> 3556

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actgagctgt gtacatttga atgcgcacaa tgaaattata tggagataga catccctggt 120
tgcgcaaata tgacatacgg gtatctaaat agtgacagat atttgtaatg gcatatgant 180
aacatcaaca tccaatgtgt taaatttga acaaaatgac agtatgaaag tgcccttaag 240
taagtagcat cacatcacat caacactgcc actagattaa g 281

<210> 3557

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-C10

<400> 3557

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tacaaaaccg tcctcaggac cctcaggaac tccaaggcaa agcttgtaat tccttgctaa 120
caactgccct ccgctccgca agtctgagat tgagtactat gctatggttg cgaagatcac 180
tgtccaccac taccatggaa acaatgttga tttgggaact gcgtgtggta aataacttccg 240
agtctgctgc ctgagtatca tcgaccctgg cgattccgac atcatcaacg caacaccagc 300
tggccagtaa acctgtgtat gccattttca gtgtctcgtc tgatgcgtca tctaaggtgg 360
ttctagagtg tagttcttgc tggacttgat ttggtcatgt gtac 404

<210> 3558

<211> 402

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-037-Q1-E1-C11

<400> 3558

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ctccccggtc acaggccaaa gatgtcggag gtggtcagga tgctcgaagg tgacggggctc 120
gcagagcggg gggaggcgtc gcagcgtact gactcgcaca agttcaaggt gcctgacttc 180

accttcgggc gttgctactc cgacctgaca gacgactcgt cgttgctggt gcaagcagtt 240
gagctctctg gaccgagatg ataacacgac agagagttga agaaggaaac gtcatcagtt 300
gtttccagca ggacctgtac agcaaaacct gcttaaaatg gcanacaaca taatgtagcc 360
aacatctaata gatgcattct gtcacgaagt gtagcacatc tc 402

<210> 3559
<211> 211
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-037-Q1-E1-C4
<400> 3559

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agaggtgatc cagggcgagg ggggttcagta cgtctgagag cctacacaag cgtcgcaaaa 120
cttcgaatgg ttgacaactg cttagctgat gacgggcaac gctaccacg ttttttcgta 180
accacgtgat ctacgctacc gggccaagta g 211

<210> 3560
<211> 423
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-037-Q1-E1-C7
<400> 3560

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ggccccctgg tcttcatctt tggcgaggat tttttattat tttttctaag atgttccgtg 180
gagtttcagg tcattctgag aatatttgtt ttctgcacat aaaacaacac catggcaatt 240
ctgctgaaaa cagtgtcagt ccgggttagt tccattcaaa tcatacaagt tagagtccaa 300
aataagggca aaagtgtttg gaaaagtaga tacgatggag acgtatcaac tcccccaagc 360
ttaaacctt gcttgcctc aagcaattca gttgacaaac tgaaagaaag aaagaaaaac 420
ttt 423

<210> 3561

<211> 344
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-C8

 <400> 3561

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 aataaattta cgtgaaatac tacgctcgaa gactgatgcg gtccctatat ttgtgtgtca 120
 tccggcaaca agaggttgaa gaaaactgat ggctcaagcc tcccatcaat cactggatt 180
 agatgacaaa gaggaataaa ttgttgtgga gaatggacga gccaccatgg cactgaataa 240
 ctgggcaatg atctgaaaca agtgggagaa ggggagcacc gcccgtagcg tcacggcaag 300
 tacaatgtcc atcacatgga ctagaatttt tcacgagggt ggat 344

<210> 3562
 <211> 159
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-C9

 <400> 3562

 atccctatac taagtcgtat tatgtcggca attttcagtt ttatggtaag catcagtgct 60
 agtctgagat actccttggg ttacttatat gaatgctcta tgcacctcag ttacatcggg 120
 tgtgttttggg tttatataaa gcatcatgtg tttcactta 159

<210> 3563
 <211> 385
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-D1

 <400> 3563

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 tcctttcact aggacatctg ccgtgacaaa tccacgacag ttggcgccca tcgtggggct 120
 atcgcacgat ggtttgacga tcttggaggg caagctcaag ggactcgaag gctatgttgt 180
 gggccggatg accaagagtc gtcggggcag gatctacatc gacgacgcag gatgggggtcc 240

cgaggccgat tcgatcgagt acgggtaccg ggtccccctt ggtggcatac acgttttcat 300
 tggcaaaatt ggtgagcctg ggcctaagcc ggacatctgc accgacctca tcgagacggc 360
 tcagcgtgcg agatctacct gggct 385

<210> 3564
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-037-Q1-E1-D10
 <400> 3564

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 gtaattgagt cgggtgacta atgagagtgc acccttttag ttcagactgg ggattttgtc 120
 agagccagat tgtcccaaaa ttgtgtttgg gtttttcagg cgctttccat cgcacagtat 180
 ttccatacta tggttgccaa gtcagcgaag tgtgctatgt cacggcgact tatggcttta 240
 gggattccct tatccattcc attgttgcaa aagaacgaaa ttgcgctctc ctgcgcgaaa 300
 tccttgacct tgttcattac aaggaggaat ctgaccccg tttcctcgcg aaattctgtt 360
 tttcgtgtgt tgtttgctta ttttgatgaa tctatggcca gtaatagagt ttatgaacca 420
 tagaaaagtt 430

<210> 3565
 <211> 404
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-037-Q1-E1-D12
 <400> 3565

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 cgtgctaacc accgctctgt catgcagaag tttggtggac agttccacct tgctccagc 180
 ttctctgagg gtgttcgtgc tcgcaacatc tgcccttctg tgccatccta tgagagggcg 240
 ttcaccacaa gctgctacat gactcagaac cttggcatca gtgtcccat gatgtcatct 300
 tctccattgt ttgccaatgc accacctgag aagaaggtg tcaagaactt tgcaattgac 360

ttcctcatgg gaggagtgtc cgctgcagtt tccaagactg ctgc

404

<210> 3566

<211> 389

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-D6

<400> 3566

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ttcttagcaa actctaataca tgtaggctta tcccaaaagg tgtgtacaga aagtatgatt 120

gtggtaaact aaaaatcaaa gactaatata atacactacg ctccaagcaa aacacatatc 180

atgtggcgaa taaaaatata gctccaagta aagttaccaa tgaacgaaga cgaaagaggy 240

gatgccttcc cggggcatcc ccaagcttag gcttttgcgt attcttgaat atcttgggggt 300

tccatgggca tccccaagct taggctcttt ccaactcctta ttccatagtc catcaaagct 360

ttacccaaaa cttgaaagct tcacaaggg 389

<210> 3567

<211> 409

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-D8

<400> 3567

acgggtcact gtaaaatgag tcctatgata tataatgaaa aattcgact agtagatgaa 60

agtgatatca taggagactc tctatcatga agatgatggg gctactttga agcacaagtg 120

tggaaaaagg atagtggcat tgtcccttct ctcttttctc tcatcatttt tttctctttt 180

atttcttttg ggccttttct ccttttttta tggcctcttt ttttatttag tccggagtct 240

catcacgacc tgtgggggaa tcatagtctc catcatcctt tcatcacatg ggacaatgct 300

ctaataatga tgatcatcac acttttattt acgttagtac tcaagaatta caactcaata 360

cttagtacia tatatgactc tatgtgaatg cctccgggtg tgtaacggg 409

<210> 3568

<211> 343

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-D9

<400> 3568

gtcacatgct gatgatgcag atacttccag ttgcaatccg tgggatcatg gatgcgcacg 60
ttcgtgaaac gctatattggc ctacgcaact ttttcgaggt catctctcgg aagtcggttg 120
gcgtgaggca actcagaagg ctacaggaag agatcgtggg gatactatgt gagcttgata 180
tgtactttcc gcccgcatte tttgacttta tgggtgcatct actggtccat atcctggagg 240
atatcatcca actcggggccg acgttccttc acaacaggat gccgtttgag aggatgaatg 300
gtgtcatcaa aggatacatt cgcagcatgt cagatccaga ggg 343

<210> 3569

<211> 400

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-E11

<400> 3569

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tgtggagggtc aaattgaagc ctgggttaga tcaactgggtg ctctgggaga ctactgacaa 120
ggttttgggtg gcgggggatgg cctcaccgga gtggatcgag ctggtggctg aggcggatcg 180
gggcgggccgg agttggggga ggagacctcc tcggggtcct cctggtggct tggcaggggt 240
ctggtgagga gtagagggtg tgctgtgctt agaacaagct cgggacctct ttttagagggt 300
gateccaagc ggtggccgtg aacgggggatc tccggcgatg gttacggcgg tgcagtgctt 360
ggtcaggaga ttatgggaca tccgagaatt tcgatcgctt 400

<210> 3570

<211> 403

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-037-Q1-E1-E12

<400> 3570

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tgctccttaa gatcatggtt atactgcgca ccatggctta gggcggcgct taattggtgg 120
 aggggtcggt gatttgggtg gaaggtgttg cgccggcggt cggggcatgt gggatgtgga 180
 aggaggagga ggatgggggt cgggtgtgga ttacctgcct ggatagacga ggccgagcag 240
 catgaangag ggtcaccggc gaggaggctg cgctgcaagc aaggagtga ggtttcaact 300
 tggaaaggaa ggcagaaata cgggaaatgt ggcttttgat aagggggggg gcacggatgt 360
 agatatttct gcggaagccg aaacatttgg aatcccttca gcg 403

<210> 3571
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-037-Q1-E1-E2
 <400> 3571

ggtcctagaa tagcgggtcg acggcaagtc tcaacatgct tagacagcgg attacattga 60
 gcgaagacta atgatcaaca tttaacttag taatgcagat gtccagggtga acctccttga 120
 agtcccatg cacattgttg ggggtcaaata aataccatgc gtcttccatt tccacatcgg 180
 cgggaaggte ccagctcggc agagtccaag tcagcttgac gtagccagtg tcgccgccca 240
 cgtacctccg aggggtagta acagtgcgca cgcacccgta catcggcctc gtgtcagtgt 300
 cagcgtcagc ggcgtcgccc ctgacgcaca ctacatagat gacgcagtgg cctgcacggg 360
 cctcgccggt gggcacgatc aagacgaaga cgctgccgtc ctctccgag actagcatgg 420
 ggcgctaate ctccagtgc tccgggacg 449

<210> 3572
 <211> 134
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-037-Q1-E1-E4
 <400> 3572

tctcaaaagc aaatctctgt tctacaagac cgattgcac agccagtact attgcacccc 60
 cttcatcaca tcgtccatcg ctctcacgca gcactatagg agctggatc tgcgtgggag 120
 ggggtggtgt ctcc 134

<210> 3573
 <211> 327
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-F10

 <400> 3573

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 ccacatgttc aaattattcg tgaagtcac gctgaaccac aatcggtagt ccagcagtgt 120
 ccttatcatg catcgctcga ccgtacacga aggggtcgtg acacatgtta tagcatcttc 180
 acgtccctga atatctacag atagcaccag cttacgatag actactgtcc ctgacctcag 240
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 tcacacaatc attcgtacat catgaga 327

<210> 3574
 <211> 406
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-F11

 <400> 3574

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 cagctattct ggcctttttg gaattcttgc aacaaccagc ccagattttg cctcgaatgc 180
 tgtggatttg gcagctgggg aacttcttga atttgccact cctggaaatg ttacacaagg 240
 acagcttgat taagctaaac atgcagcaaa gtgtaaagtt ttgatggact tggaatcaag 300
 agctgttgca tgtgaagaca ttgggaggca ggttatgact tatagtgaag ggaaacccat 360
 cgagaaattc ttgaacgatg tcgaagcaat taccctgaat gacatt 406

<210> 3575
 <211> 349
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-F12

<400> 3575

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cacccggaca tcggcatctc ctccaaggcc atgtccatca tgaactcctt catcaactac 180
atcttcgaga agctcgccgg ggagtcgcc aagctcgccc gctacagcaa gaagcccacc 240
atcacgtccc gggagatcca gacctcgtc cgcctcgccc tccccggcga gctcgccaag 300
cacacgtct ctgatggcac caatgccgtc accaagttca cctcatcct 349

<210> 3576

<211> 162

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-F4

<400> 3576

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attaccggga gtggtctaag acgatccac tcatgaggga cggtcaccat tcgtcagga 120
cccatgttg taccacactt ctggacgtca catctgacgt ca 162

<210> 3577

<211> 377

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-F9

<400> 3577

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tgaaatgaag ggattagatg aacaatgtaa aatttaaaat aaacacattg tattagtatt 120
gtttggcccc tgttatcaaa caaaattaag tcatttgccc ccccttgatc tttaatcct 180
ggtaccacca caggtcccgg tatagatgc cccgaggac cgagccaagg cgatgcatct 240
acatagggga cctcctatac ggcatgtgt gcgttgggaa agagagaagc gtgttgccgc 300
tcgtcgcca cacatgacct tgggcccggc caggtgcggg ggctcccctg ttttaatcat 360
cattactttt tagtttt 377

<210> 3578
 <211> 271
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-G1

<400> 3578

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 gaaagagaca aacacagtgc acgcgcactg tgccgttggc cggaccgtgc tcatgctcgc 120
 tgcggcgagc tccggcatcg gcgagccgca ggggtggagtt attgacgtgg agacgaggat 180
 tgttgcgagg ggtgactgcc gctggccgctc cgtgcagcga gcagaggctc aacagatgtg 240
 ctggggagcg tcgcagatca tacggttcgg c 271

<210> 3579
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-037-Q1-E1-G10

<400> 3579

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 ttgcacgagc cattggtgga tggcaggctg gaccgtgtcc agtggcgggt ggagccgtcg 180
 ggctgttct ccaccaagtc gctttactcg gccattgcc cttcctccgc cccctcccc 240
 ttatcgatgg tttggtccgt ccgcgtacca ttgaagattc gcatcttcat gtggcagtg 300
 attcacggtc gggtcncgtc tggagtggag gtctgcaagc gcaatggccc gggcacccgt 360
 atctgcccgc tctgtggagt ccctgaggac tcgaaccaca tcttgttctc ctgcgttt 418

<210> 3580
 <211> 385
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-G11

<400> 3580

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accccgcccg ccgggacgag atcgtcatcc attgcgagaa gcacggcgac cccaacgaca 180

aggtcaacgt cttcttcctc gacgagtcca ataccggcct ggccgtgggc aggagctgcg 240

tcgagaagat gaagctgggg aacgccacca atggcatctt cgtcctgcag aaggcgctga 300

ccggccccggc caggaccgag gtcgcacaga gcaagaagta ccacctcgag gttttccagg 360

tcgcactcct ccgcacccct gtctg 385

<210> 3581

<211> 277

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-G3

<400> 3581

agagcaaggt ggaattttta tattgaagaa atacatgaat tctcatgctt cacttagatt 60

attttgagag tcctaaatag cattgtaatt tgccaaaagt cctattaggc aaggatttca 120

cgaacaataa aattctcgct atgagtgtgt tgaatactac tagaagttgg tatttgataa 180

ttgttttgag atatggagat ggtgatatta gagtcatgct agttcagtag ttgtgaattt 240

gataattact tgtgttgaat tttgtgactc ccgtggc 277

<210> 3582

<211> 142

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-G8

<400> 3582

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gcttttcgtt tctgtctctc gtgtgtatgt tttgcttggt ttgcgggtct gctgtcttgt 120

tttggtttgg gtttgtgggc tg 142

<210> 3583

<211> 409
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-G9

 <400> 3583

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 cacacaagca catgacatgg caatgactac gaataaacgg aaggcacctc gcgcatcgga 180
 tccggggcgt tgcaatTTTT ctgagttgca gaagtttgtg ttagatccaa attactacag 240
 actgttctgt ttttgacaga ttctgttttc gtgtgttgtt tgcttatttt gatgaatcta 300
 tggctagtat cggaggttat gaaccatata gaagctggaa tacactaggt ttaacaccaa 360
 tataaataaa gaatgagttc attacagtac ctttaactgg tggtttgtt 409

<210> 3584
 <211> 407
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-H10

 <400> 3584

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 gacgcgctcg ttctccttcc ccgctttgtc ggcgacctct ccgcagcagc gcgtacttgg 120
 atctccaccg acctctcogt agcagcgcgt gcgtcctttt ctttcttgcg gcggcggggc 180
 tctcttttct tgagtgtttt ctaacttttc ctctccctct gtgcggcttt ggccgcctct 240
 tgctctaccg cccattcggc cttggcatct tcaaattcct cccacatagt tgtgaggtcg 300
 cgagcggcga tgaactcggc acatcaggat gccattgctt ccctaccatt ttgtgtgcag 360
 tcgtgggcag cgaggaaactc ggcgcgggcg gatgccatcg ctgcctt 407

<210> 3585
 <211> 373
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-037-Q1-E1-H12

<400> 3585

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tgattattgt tcccagaagt tgttttctca gaaaatccat atgcatacga agtggggttag 180
acttaaagtgt gctagtcata ttcttcatga tgctctcttt atgttacaat tcttatcttt 240
tatgtgagca tcgttgagat catcatgcct agctaggggc gttaaacgat atcgcttggt 300
gggaggcaac ccaattttag ttttgttacg ttagttttgt tctgttttag tattaataaa 360
ctcatatata ctc 373

<210> 3586

<211> 422

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-H2

<400> 3586

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ggtgctgaag caggtgcacc ccgacatcgg catctcctcc aaggccatgt ccatcatgaa 120
ctccttcata aacgacatct tcgagaagct cgccggcgag gcggccaaagc ttgcccgccta 180
caacaagaag ccaccatca cgtcccgga gatccagacc tccgtccgcc tcgtcctccc 240
cgggcagctc gccaaacacg ccgtctccga gggcaccaag gccgtcacca agttcacctc 300
ctcttaggct ctttgccaaa tctcttctgg cgtgtgatgg atccatgttg acctgtagtt 360
agatcatgtt ccgtctgtca tcttgtaaga aaacgtgctc tcggtactgt tattcagacc 420
cg 422

<210> 3587

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-H3

<400> 3587

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 tatgttgtgg aaaatggtgt tccctctgtc tcaccttcac tgaacgctac cgatgtgaag 180
 agattcaagc aactcgattc tcaagcgaag aatatcatat gtggccatct gagtaaagga 240
 cagtatggaa gagtgagtgc tttggaaact actaagctta tctgggatag gctgtccaaa 300
 gtgaatgaac gagtctcaat tcagcgtgac tctcgagttg atgttcttcg gaatctcttc 360
 aaccacttca taagactcga caatgaaaat gtccaacaaa cctttgatcg cctcactgac 420
 atctcaaag agc 433

<210> 3588

<211> 465

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-037-Q1-E1-H4

<400> 3588

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 tctcgggtag gggccctaag ctatatgtct gaggaccgaa ggtaactatg aacaaaggac 120
 accgtgtttt acccaggttt gggccttctt aatggaggta agaccctact cctgcttgat 180
 tatattcaag ggtatagggg ttacaagagt tgatctacct cgagatcgat tcggctaacc 240
 ctagatcagc tagcctagca atgttgtgat cctgcctccg atataccctc cggtttatat 300
 agacaccaga ggggcttaag gttgtaacaa agacggtttt accaaaagga ataacatctc 360
 cgaacaccta tacttgccat ccacgcatac aggagtcctt ccagacatga gaagtgatct 420
 actatcttgt atcccgaatg gccatcaaat ctggcccgcg tccaa 465

<210> 3589

<211> 244

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-A10

<400> 3589

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gacactgtga cttccatgtt cggtttatTTT gaaaccatgc ttgctctctt gtgacacgca 180
gcttgggatg gggttgtcgt acatgacttg tcgctgggtga cgcaccattt tcacgttgat 240
gaaa 244

<210> 3590
<211> 420
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-A11

<400> 3590

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tcttttttct acttctttta cttcttttcg tttcttcttt tcttcttctt ctacttcttt 120
tcttcttctt ctacttcttt tcttcttttt ttacttcttt tcttttcttc ctttcttctt 180
cttctacttc ttttcttctt cttctttttt catttttttt ctacttcttt tcttttcttc 240
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ttcttttttt cttctacttc ttttcttctt ttcttctaac actaacacta tataacacat 360
atctagcact aaatctatca ctaacaatta aacagtagaa agtagcaata ggagtgtgat 420

<210> 3591
<211> 446
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-A12

<400> 3591

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gcatgggtgca tggattgaat caataatcag tcgtagtttg gttacttaca tatgaaagtt 120
cactatgcgt atgaacaaga taaaaaccct aaatttatta gcatcagttg aaaattcact 180
atgctcaaga ctctattttt atgtctccaa ctattcattt caaaattctt atttccgatg 240
tatattttgc agtcttgcat ggtgcatgta tcgaatcaat aatcggttgt agcttggttg 300
catatatgca attatgcccg tgaagtagat acaaattcta aatatctcag cattagttga 360
caatttaaca tgcttaagaa tcctttatta gaaattgggtg tttccaatgt atattttcga 420

ggctttctat gcatgttggt tactta

446

<210> 3592
<211> 458
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-A3

<400> 3592

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taataaaaac tatcgtagaa agtgaattgg atgctatgat caatttgatg cttgataatt 120
gttttgagat atggaggtag tgatattaaa gtcatgatag ttgggtgatt atgaatttaa 180
agaatgcttg tgttgaagct tgtgattccc gtagcatgca cgtatgggta accgctttgt 240
gatgaagttg gagcagaatt ttatttattg attgtcttcc ttatgagtgg cggtcgggga 300
cgagcgatgg tattttccta ccaatctatc ccctaggag catgcgcata gtgctttggt 360
ttttgatgac ttctaaattt ttgcaacaag tatatgagtt cttttgacta atattgagtc 420
catggattat acgcactctt tcacccttcc accattgc 458

<210> 3593
<211> 333
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-A4

<400> 3593

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agatgttcca ggagttgaag ttaatatctc aagcaaagtc ccggattgag agatatgaag 120
tctccaataa gttctacagc tgcaagatgg aggagaatag ttctgtcagt gagcatatac 180
tcaaaatgtc tgggtataac aatcacttga ttcaactggg agttaatctt cctgatgata 240
gtgtcattga cagaattctt caatcactgc caccaagcta caagagcttc gtgatgaact 300
ataacatgca aaggaatgga tagacattcc cga 333

<210> 3594
<211> 465
<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-038-Q1-E1-A5

<400> 3594

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acgccccaaa atgaaaagac agcggcccaa ttccagagct attggcaggc accgactgta 120

ctagctcgat tttgtttgtt caaaacaagt atttgattaa aaacattaat caaaaaaaaa 180

aaaaaaataa aaaaaaacat aaaaaaaaaa aaaacaaaaa aaaaaaaaaa acaaaaaaag 240

aaaacaaata gaaaaaaaaag ataaaaaaat ttaaagcaaa taccaaaaaa aaaaaaaaaa 300

aagggggccc cccaaaatgt taaaccatth taccocggtg agagcattta aaaccctca 360

aaagggtccc ccaaatttaa atacaggggc cgctttttta aaaattcttg tggggaaaaa 420

cccgggggttt ccaaatttaa ccccccttga aaaaaaaccc ctctt 465

<210> 3595

<211> 405

<212> DNA

<213> *Triticum aestivum*

<223> unsure at all n locations

<223> Clone ID: LIB103-038-Q1-E1-A6

<400> 3595

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taccaaattg accatgggag ttccccaacg aagatatgta agtctgttgt ggatgaagat 120

atcatcagca atctaccga agctctcaga gacaaaatcc tttgttgtct gccataaaaa 180

gaagctgttg gaacatgcct cttgtcaagg acttgagggt acacatgggc ttcaatgacc 240

gaactgatgt tcaggacagc tgatttcgct tcaggaaatg atagtgcaga cgatgaccgc 300

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tgctgaata ccgtancgaa tgaaatggta tccactggag gacac 405

<210> 3596

<211> 438

<212> DNA

<213> *Triticum aestivum*

<223> unsure at all n locations

<223> Clone ID: LIB103-038-Q1-E1-A8

<400> 3596

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acttcggccg aggcattgat gatttcctgc nctacgtcga tttctgcgtg tgaatcaaga 120
gagggtttaag gtttatcttt aagtagtaaa atgctggtgt gatgggcctc ctgtgagtgt 180
aatcaatccg tgtgcgttgg gagggaggag atcatcttgg gtttttcccc gggcagctca 240
accagctcgt gcccaagggtg gtgtccgttt tccctagtct cccgagcaca ttancgttat 300
gggtggtgaga gtgagtgagt gagagtatct ttgatagcag gttacatttg tgataagtta 360
tagtagctgc tggttatgtt atgttcctcc ttccatgtta tctgtcaatg ttgggtccaga 420
cattgtagct agctcaag 438

<210> 3597

<211> 460

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-B1

<400> 3597

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cgccagacac ctggccaag agaagccaag aacaatggcc gactaataaa gcctcatgac 120
ccgcttttgt gcaggggagg acagctggtt ggcaagggtg agccccagca atccaagtac 180
atccgaaact agggatggaa acggaaaacc gcgacgcaat aaggaccgtc gctggactaa 240
ggacaaaaat ccgaagagca caacagtcaa tgccggattc aaagggtcac gacaaaatca 300
ggaaaaatcg ccccccccca ggacaacagg gacgatccat ccaacctaaa taaaatcctg 360
gataggatat gtcagatata cagtactccc cggaagcctg ctaaccatac ccacagggac 420
tcttggtttt tcaacaatc cggcagactc aatgccgaac 460

<210> 3598

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-B11

<400> 3598

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ccaaggagaa cgatataaag agtctgggga tgtccggcat agaccggac aactgatgg 120

gtctgctagg gcgagcggct atctcaatga cacattgtaa tttaatgggt acggtaattg 180

ataggatttc atccgccata agtggattga ctgaagcctt tacaagtctg catgagcggc 240

tttgaggtag ccaacataat atatgtattt ctgactgtac cgcacatgct acgtgtgctc 300

tgtatatata ctagcccctg agactctggt tgccactcgg aagtggcaaa cagaggatcg 360

taatcccagg tcataatcgt gctgctacgt atgtgcatgc ggttgattgt ccagccgctg 420

accagactgc tgattttgcc gaactgaa 448

<210> 3599

<211> 472

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-038-Q1-E1-B2

<400> 3599

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tgggatgggg ctactagat tattcaggcg attcggaaaa attattaagt cgtgcaatgt 180

actagtacta gtactaag cagtctagca ctatgtaagc tgctctctga tgtgagaaaa 240

ataagagtgt gtaagcgatc ccgcgtgagc tcttaaattt cctcgagaga acgttgctgc 300

agcagactag cagaggagtc ccgcgtaatc gattgtcagt taaagaagta actggacaga 360

gttcgcggcg gggacttac atgcggcgta tccagccagg cattccgtcg agcaggtant 420

gagccgagtc ctgcacaagg agttgggcat ggtctgacga gagtataccc ga 472

<210> 3600

<211> 458

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-B3

<400> 3600

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gaggttttct tccgcatcaa gagatccaca cagctgaaga agctgatgaa cgcctactgc 120
gaccgtcagt ctgtggacct caactccatt gctttccttt ttgatggtcg taggctccgt 180
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caccagaccg gaggggggctt tctcgcct tagaaggagc ttgctgcagc ctggctgttc 300
tatgtcgtat gctaccttta gaactagagt aaaatgtaag aagtgaaga acttgcgagg 360
ctatgattct gtgccataac ctgagggggg gtctggaggt gaaagaacat cggagtactg 420
ttgatgtcgt gactgaacta tcatccattg cctaatat 458

<210> 3601
<211> 387
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-038-Q1-E1-B5
<400> 3601

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cgacgaaagc ttctgactcg atatagcggg gacgatgaaa gcttccgact cgtgatggtg 180
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ctccgctgtt gcgttagcct ggtgacatgt taagattttg gctggatgat gggacatgag 300
gtggatttgt acacctgcaa ggaaacgaat atggtgctcc atttttgaat tacgacaccg 360
tttcaaaaca aaatcatctg agcggac 387

<210> 3602
<211> 349
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-038-Q1-E1-B6
<400> 3602

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 ccactaattt ttgcttggac cctgtgaact gcatctgac cgctgcacac cgttgctact 240
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<210> 3603
 <211> 406
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-B8
 <400> 3603

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 gggtcgaggg gatcgcgat gaggggtccc agatcgagga gctcgttgat gggaaagaag 180
 aagaagatgc ggagcgtcag cggcaggagg acaaggcgag ggagcagcat ctgatggaga 240
 ctctcaaagg tctgatcgt gcatttgggg atctcatttc tgctctggg attacggagg 300
 agatgattga cagtttgatc ctcttgaagg atgccagggg aataccagga ttgctctctc 360
 taagtgaat acaagataga gctatccaga taatgaatgc aacatc 406

<210> 3604
 <211> 445
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-B9
 <400> 3604

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 gccacgacta aagcttctga ctgatatat cggatgatgat gaaagcttcc gactcgtgat 180
 ggtggtgact ggtgatgctt gaaccatggg aaatctctca tttccaaca attcatgctg 240
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tgagggtggat ttgtacatct gcacgcaaac gaatatgggtg ctccattttt gaattacgat 360
 accgtttcaa aacattttctc atctgagcgg acatactgta agtactacgt aatctatatg 420
 ttggcagtat tagcacgcca tctgc 445

<210> 3605
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-038-Q1-E1-C1
 <400> 3605

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 ctaacaactg cctccgctc cgcaagtctg agattgagta ctatgctatg ttggcgaaga 180
 tcaactgtcca ccactaccat ggaaacaatg ttgatttggg aactgctgtg ggtaaataact 240
 tccgagtctg ctgcctgagt atcatcgacc ctggcgatc cgacatcatc aacgcaacac 300
 cagctggcca gtaaacctgt gtatgccatt ttcagtgtct cgtctgatgt gtcactctgag 360
 gtgttctaga gtgtagttct tgctggactt gatttggctt tgtgtacatc atttatcagt 420
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<210> 3606
 <211> 459
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-038-Q1-E1-C12
 <400> 3606

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 aaagaaccac ctcttcatgg gaatagtttg tgtaactacc gtgtttcaga tactaatagt 180
 tgaattcctg ggaaagtctt ttaaaattgt gagacttaac tggagtctat ggtagtttc 240
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tgtaagacct ctccaggcct atttcaagcc ttgttgga aa tcacacgcc gagacgaaga 360
ggaaggcagg caggggctaaa aaggctgcag atcacctagt gtaaataagac atgggtcang 420
cgaagaacag gaacccgtac cgcctctccc agtgggaaca 459

<210> 3607
<211> 357
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-038-Q1-E1-C4
<400> 3607

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atgtatcacg aggcttgtcc aaagttaatt gacggcttta tggaagaga ggacattgta 120
aagatgggtca tcttcaacac atttattgag ttgttacct aaactggcac tatgacaaat 180
cgacagggcg acattgatga gtccagccct acatggttgc tgaatcacga agtacaccac 240
gttgtcaact cgatcaatag gcacttgcct gaacaatcaa tcaagactaa agttgaagca 300
ttcccagtat ggacggaact tgtttttgtc ttactagatt gacttgctga tcatttt 357

<210> 3608
<211> 368
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-038-Q1-E1-C5
<400> 3608

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actaaagagg cggcgtggtg cattataccg ttcgcgagct gatcctagca aatgaggtga 180
tcgagtgtgt tgcagtttgt caactaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaa aaaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaattaca aaaaaaaaaa 300
aggatttgaa aaaaagcata aataaaaaaa aaaaaaaggg ggcccccaa gggtttcaac 360
ctttatttt 368

<210> 3609

<211> 454
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-038-Q1-E1-C6

<400> 3609

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catgtccatc atgaactcct tcatcaacga catcttcgag aagctcgccg gcgagtcggc  180
caagctggcc cgctacaaca agaagccac catcacctcc cgggagatcc agacctccgt  240
ccgcctcgtc ctccccggcg agctcgccaa gcacgcccgc tccgagggca ccaaggccgt  300
caccaagttc acctcagcct aggcttcacg ggacgaatgg atggtcgcat tctgtatgta  360
gttagctgcc agtttgtgtt ctgaagatgt tatcttgta gaatcagatt gtatcgccgtg  420
tcgggtctgaa gaaatagtaa tgctcttttc agtg                                     454
  
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<210> 3610
 <211> 462
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-C8

<400> 3610

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cgagtaagtc ctcccccaa ccgccccgta acatatgaat tcttagattt cgatcgtttt  180
tcttttaaca ttccgtgttt tctgcagtga cacacattgc acgtcatcc tctaagccc  240
caaattttcc atggccacgt atttcgaccc ggaccgtcag tcgaacgtag actacacaaa  300
tgtcaagaag gttcttgatg atgttctccc cggctacgtc aaatctggag gcaccttcac  360
caggcctatt cgtaagtacg gcaagcacgt gttctccac aacacgatgt tctgctgcgt  420
caagcagccg cctggcggtc agaagggtgc ctactacgcc at                                     462
  
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<210> 3611
 <211> 468

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-C9
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 tacgatagca agttccaaaa catgagctgg ttctgctact aacatgtgaa cacgttgctc 120
 cagacaagca tgaccacata gtagtcttat aataaaacac taccgagttc aggaggggga 180
 accatcaacg aggggtatcg agtccttaca taagtccgga ttagctctta cgaaggaact 240
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 gttgcaagtc ttcaaaccac agcattcttc gcacgtgtgc atgactgatt tggaatgatt 360
 ccaaagaaag caacattgac tttctcgaat ccacggcggc aacttgcac agatgcacat 420
 gaattaaagg aagtcactac cttcatccga acatatgctt catgaact 468

<210> 3612
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-D1
 <400> 3612

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 gctggcgcag ggaactcctc gggcgattcg ccgctgctcc tgctgccgat gctggacgac 120
 gacatctccc gtgagggtcca gcgcctagat gctgatatgg accgattcat cagggcccag 180
 agtgagcgca tgaggcagtc tatattggag aaagttcagg caaagcagtt tgaagcgctg 240
 gcctctgttg aagacaagat cctccgaaaa atacgcgata aagagtcaga agtgcagaac 300
 atcaacaaaa ggaacctgga actcgaggac cagattaaac aaatggcagg ggaagttggt 360
 gcgtggcagc aacgagctaa gtacaacgag agcatgatca gcgcactcaa gtacaacctg 420
 gagcaggtat gtgcccata g 441

<210> 3613
 <211> 457
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-D10

<400> 3613

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gtctctccat cttattaaaa atctagtttg cattcattct tttactgggtg aaaatcctgt 120
catcgttgag tttgacatgt gtgttttttc cgtaaggac gcccgtaacc ggatgggtgct 180
ccacgggatgt gatagccctg acagctttac ctgatccacc caccgcctc caccaacacc 240
tctctgggtcg ccctttccat cgatgtagac ctctggcatg ctcgcttggg acatcccaac 300
cacgccaccc tttgtcatat tcttccgagt tttttcacg tgtaataaga ccgatgggtca 360
cacttgatcat gtgtgtcatc ctggaaaaca tactcgtctt ccttttagtg catcctctc 420
gattgcatcg tatccatttg aactacttca tagtgat 457

<210> 3614

<211> 453

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-D11

<400> 3614

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tggcaccccc aagataatcc aaggacacca aaaagtcaaa gcttggggat gccccggaag 120
gcatccctc tttcgtccac ttccatcggt aatttacttg gagctatatt tttattcacc 180
acatgatatg tgttttactt ggagcgtctt gtattatttg tgtcgttgca tgttagtcta 240
ccacaatcat cttgttgta cacacctttt gagagagcca tacatgattt ggaacttggt 300
agaatactct atgtgcttca cttatatctt ttgagcttga tagttttgct catagtgctt 360
cacttatatc ttttgagctt gataagtttt gctctaatgc ttctcgata tcttttagag 420
catggtcgtg gatttggtct aaagaaacta ttg 453

<210> 3615

<211> 432

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-D2

<400> 3615

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cggcattaaa gccggagtag tgcgatcctt gagcgaatcc gatacgcatt gggtagagga 180
gctcgactcc gtacaatggg ggctgctgac catgcctaata cactaactacg gatacacacc 240
atTTTTtaggg tgtacggctc ataggcgggtg cagccctgcg acataattca cgactcacct 300
aaagtgcaca tgtgagtaaa gaaataagcc gaacttgatc ggcatgacag tttggacgcc 360
ctgaacgacg atcgtgacgt gcgaaaagcc cgTTctgcat tctatcagca ccaggctcga 420
ttgtatcaaa tc 432

<210> 3616

<211> 430

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-D3

<400> 3616

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tcagacgga gaatcaagga gccgtgagtt tggaaatgaa gctgcggcct taattgtcac 120
aggcttggtta acaggataag gttctttata accagtgcg tcacaccggt ccaccgcgag 180
cagagaagat gacatcacgg cggttcaaca aaatacaaga agatgttgaa gatgaagatt 240
tttgctaagg attgatatga acctgttcaa atcaatttgg ggcctaattg tggggatatt 300
actacggggc gtaaaccggc caggacaggc cgggttaact tcatcagtag ttgagtatga 360
taaaagccca tgagggcaga tgagggctaa aggcccataa tcggtttaag gcctatagct 420
ataaaccggc 430

<210> 3617

<211> 459

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-D4

<400> 3617

cgggttctta aatagttttc tttagttttg tttcactcct gtaagaaact cttgtattgt 60
 aagttgtaag aaagagccat tataccaatt cagaatttct actagaaatg acgaatgggt 120
 aaaaaaagtt ctagacataa gaaaattaga ctttcttcca cggaactatt cacggcatat 180
 cacacatfff ccatttcttt ttacttttta ctatagtcta ttcttactag tatttttctt 240
 tccttccatg gattcttttg tcaagaattg tcgtagtttt ttttattttg acctgattga 300
 gattaagtgg atgcaatgaa gaaagaaatt gaattagact acttaactat ttcaatctac 360
 taatctagtc tattctatgt agattcaaag atcatataat agagagaatc taaagtgtcg 420
 tatacaaaac tatatgtagt tctttctacc acactttta 459

<210> 3618
 <211> 353
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-D5
 <400> 3618

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 agaggctttc ttctgttgaa gttgttcagt tgggctgggt tgtgaatgtg tacatgaagg 120
 ttttctttta tcttagagag acaccttgct tcagctgtaa acttaagagc gtgcatattt 180
 acctgaatgt agatgtggcg ctgctatttg caaatcttcc atgtgccaga attgttgctt 240
 ggaaaaaaaa aaaaagaaaa aaaaaaaaaa gaaaaaaaaa aaaaaagaaa aaaaaaaga 300
 gagaaaaaag aaaaaaaaaa agatagatat aagaaaaaaa ataattgagt aag 353

<210> 3619
 <211> 461
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-D6
 <400> 3619

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 tatttatcgt tgctttgaac aaggttgatc gtctttatgg ttggaagacc tgccccaatg 120
 ctctatcgg gaaagccttg agacaacaaa atgatgatgt caagttggag ttcaatacaa 180

ggcttactga tattgtgaca caattcaaga tgcaagggtg gaatactgct ttgtactaca 240
agaacaaaga gatggaagat acatttaaca ttgtgcctac cagtgcagta agtgggtgaag 300
gcattcctga tctgcttcta ctattgggtgc aatggggcgca aaagacgatg gaagaaaagc 360
ttacttttgt tgatgaagtc cagtgtactg tcttggaagt caaggttatc gaaggatcatg 420
gcactacagt tgatgttgtg ctggtcaatg gtatgctcca t 461

<210> 3620
<211> 266
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-E11

<400> 3620

cggggagcta ttcattggtct catgttagga gcatcactac aatatcataa tgttccaaag 60
tacagagttt gtcgaccatc ctagatgtgc acatacatat ctacaagtct acgctgtaaa 120
taccacatat ttctacgatg tctcagctat cattcaaaga cacgatcttg aatctcgtcg 180
gcagtcgtat agtaggtgct tttttatatg tctatcttat attataatac ttacttgact 240
taggttgcca gccatatatt atttct 266

<210> 3621
<211> 433
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-E5

<400> 3621

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acctcgaagg cgtcattctg gcaaaccaag ataaggataa cttcctcgtg ccttactttc 120
ccgagtaagt cctccccctca accggcccggt aacatatgaa ttcttacatt tcgatcgttt 180
ttcttttaac attccgtgtt ttctgcagtg acacatgttg cacgctcatc ctccaaagcc 240
ccaaatattc catggccacg tatttcgacc cggaccgtca gtcgaacgta gactacacaa 300
atgtcaagaa ggttcttgat gatgttctcc ccggctacgc caaatctgga ggcaccttca 360
ccaggcctat tcgtaagtac ggcaagcacg tgttctccca caatacgacg ttctgctgcg 420

tcaagcagcc gcc

433

<210> 3622
<211> 427
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-E7

<400> 3622

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cgtacattac ttaggattat tgaaggcatt tgcaaaataa atatcatgat gaaagattat 180
gcacttgaag tttacacgag ctatacaagt gcaccatgca catgtagcca aggaaatgct 240
cctctacatg catgcgacag aaagatggaa ggaggagcca cccttgcatt ctacgatgct 300
catgtacatc acgttggggc cacacatctt gtcaaccgaa ggaaacatca attccgactg 360
aggcgtgcag aagttggact ccatacgacc tgcgttccat aaacaaggac ccaacgcggc 420
cgccaat 427

<210> 3623
<211> 460
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-E9

<400> 3623

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acgatcacgc acgactgatg caagccctgg tgcattccgt agaacctcag gtgctcagag 120
aagcccaccg gttgattctg cagaaccaca gcgttctctt tcggctcggc attcatctaa 180
cccgaagaac tacgagtctg ccctcaaagg tattgaaggc cttaatttcg atggcgatga 240
gagggtcag tactagtagc actgagaaaa cgattcctct tctacgtgtg ctgtgtataa 300
attataatct gaagataagc acagcatttc ctgttgagtt ttggattaca ggagatgtta 360
cgaggaggat gtgaagtgct attgccagat gatgggtgtg gtcttctgga cacggtaaatt 420
aagtggtcag cccgaggcac aaggaatgta gctctcataa 460

<210> 3624
 <211> 453
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-038-Q1-E1-F10

 <400> 3624

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cgtcgtctag aagctcatgg atgacattgc tgtactcctc ccgcttgccc gggctcctca  120
ttgcctgccca ccctaattgg cctccatggt cggaacctct ttttaagcatt ggtggccctg  180
cgactgcccg ccgatgccac gaagaatgtc cacctggagg tcgcgctcgc cacgaggtgc  240
ctgcacctgc aagaattcat cgacctacac atcaacgtgt acgagcaa at cgtgtacata  300
ggatatctaca aggacaacga ggacgctatg atgtttgccc ttttcaactg gttggatgcc  360
ttggatgcct ttgctgagaa gcaccttgac tttgccacaa aagccgacaa tccttagccg  420
ctggtcggtg gcctggcaca ctgagttgag gag                               453
  
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<210> 3625
 <211> 434
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-038-Q1-E1-F3

 <400> 3625

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tgggacagag aactgtgct gcgtgcccta cgtgctgcat tcaacaaccc ggagcgggct  120
gttgagtatt tatattctgg tattcctgag ccgatggaga ttcttcgacc accaccaagt  180
gcccagccag ctgatcctgc cctggcttca caagcagctc aacctgcagt tgctcttcc  240
ggtcctaacg ctagccccct ggacctcttc cctcaagccc tgccaaatgc ttcagcaa at  300
gctgctggtg aaggaaatct ggatgttttg cgtaacaatg cacaattccg aagcttactt  360
tctttagtgc aggccaaccc tcaaatctta cagccattgc ttcaagagct gggaaagcaa  420
aaccctcaga tttt                               434
  
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<210> 3626
 <211> 467
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-038-Q1-E1-F4

<400> 3626

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 cttagggctg cattccagga gacaaccatc tcgcccgcga atttggtgct cccattgttc 180
 atccacgaag gggaagagga tgctccaatt ggcgccatgc ccgggtgctt taggcttgga 240
 tggcagcatg ggcttcttga tgaggtgtat aaggcacgcg atgttggtgt taacagcttt 300
 gtgctctttc caaagggtcc ggatgcattg aagtctccaa caggagttga agcatacaat 360
 gacaatgggt tggttccacg aacaattcgc ctgctcaagg ataagttccc tgatattatt 420
 gtttacacng atgttgcttn tggaccgtta tcctctgatg gacatga 467

<210> 3627
 <211> 412
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-F5

<400> 3627

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 ggagagaggg caaaaggaag gaggcctgcg ccccccttct ggtctgaatt ggacaagggg 120
 cgcagccccc ttttcttctt tcctctcccc ctctttcccc ttctcctact ccaacaagga 180
 aggaaggggt cctactcccg gtgggagtag gactccccct ggcgcgccac ctccctaggac 240
 ggccctcccc tcccccttgc tcctttatat acgggggcag gggggcacct ctagacacac 300
 aagttgatct tcgtgatcgt tccttagccg tgtgcggtgc cccctccac catattccac 360
 ctcaagcata ttgtagcggg gcttaagcga aaccctgcca cggtagaaca tc 412

<210> 3628
 <211> 432
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-F6

<400> 3628

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ggggccacct cggcgacacg ggcgcagggg caaccgcact gaagctctgg tacatgagca   60
ggccacctcc cggaagctcc tgctcgacga catcctcgag cacgtaggag gagccagcct  120
ccgcaccgcc cgcccatgat ttggcgaagc cgtggccacc gaagatgggtg acggcgacgg  180
agaagtctga cgggcggaag cacgacagca ccctctcgat cagggtcactg tagaccaggg  240
agccagggtt gaagttcatc gttcatagc tcgcgtagct gaagccctcc tcaggagtga  300
cgtggatcgt ggaggctgcg gggccgcaga cgccgttcat cgagtagccg cacgggtcga  360
agtcgaagtc gcagatctcc atctccggga tgatggcaga gatccccgag accttgggtca  420
tctccttggc cg                                                    432
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<210> 3629

<211> 437

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-F7

<400> 3629

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cctccaagtg cagaggtttg taggacagta gaaaatttcc ctcaagtgga tgacctaaagg  180
tttatcaatc cgtgggaggc gtaggatgaa gatggtctct ctcaaacaac cctgcaacca  240
aataacaaag agtctcttgt gtccccaaca cacccaatac aatggcaaat tgtgtaggtg  300
cactactttg gcgaagagat ggtgatacat gtgcaatatg gatggtagat atagggttttt  360
gtaatctgaa aaatataaaa acagcaaggt aacaagtggg aaaagtgagc gtaaacggta  420
ttgcaatgct aggaaac                                                    437
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<210> 3630

<211> 293

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-F8

<400> 3630

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tcctactatc acagaccttt gtcaagttat taccocgccc tcttgaattt gcaccttate 180
tctgaggctg aatgggtgta acgttttggg ttgtctcgat gagtttattt ataataatg 240
gtacttatgt tggttctaaa agtaaaaaga aagaaaagat gacgttaaga aaa 293

<210> 3631

<211> 436

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-F9

<400> 3631

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ctttttcatt tagttttcac ttttctttta tgcacatgc tggtatgata tagtcgatgg 180
ttgctttata gaatgctctt tgcacttcac ttatatcttt tgagtatggc tttatagaat 240
gcttcatgtg cttcacttat atcatttgaa gtttggattg cctgtttctc ttcacataga 300
aaaccgcgat ttgtagaatg ctctattgct taacttatac ttgttagagc gtgggcatat 360
cttttgtaga aagaattaaa ctctcttgct tcacttatat ctatttagag agatgacagg 420
aactggtcac tcacat 436

<210> 3632

<211> 447

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-G1

<400> 3632

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cattcttcca tttgtctc tcttagatca cccgattctc ctattcatgt cctcactgct 180
gatggtactc ccctttctgt tgctagtaga ggcaatctta ttactcctta ttctgttcct 240
gatgttgctc atgttctctg acttaccatg aatttgtttt ctgctgggtca acttacggat 300
tctggttgctc gcggtatcct tgacgttgac tcttggtctg tccaggaccg tcatacgcac 360
actctggttg gggtggccc tcgcccgt gattctcaag gtctttggga gttggactgg 420
cttcatgttc cctctgctgc aacaaca 447

<210> 3633
<211> 441
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-G11

<400> 3633

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cttctaaaga aatccccctc gctcgcgc tgagctgagt gtatgttgaa acttttcgctc 180
catcaagcgc cgctcgcgc cctcggccg cccgatgac gccctctctc tcgccaatcc 240
ccactcctcc atgaggtaat ttgtctcttg gaatttggaa gaggaagatg atgtagcgtg 300
gttggtatct atcaatatgc cttgtgttct ggttggttct catagctagt tacattgtat 360
tctgtactgg tctggttgta tgaacactat gaaaatgtga gaaatacaaa gctgatgagt 420
tggacctaaa aaaaaggagg a 441

<210> 3634
<211> 458
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-G12

<400> 3634

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tgctatggtt ataaaattgg tcctagaatg gtaggcaccc aagttgggta taataaaaac 120
tatcatagga agtgaattgg atgctatgat caatttgata cttgataatt gttttgagat 180

atggaggtag tgatattaaa gtcattgctag ttgggtgatt atgaatttaa agaattgcttg 240
 tgttgaattt agcaagtcct gtagcatgca cgtatgggta aagttgtgta acaaatttga 300
 aacatgaagt gtacctggct tgtgcatcct tatgagtggc ggtaggggat gagcgatggg 360
 cttttcctac caatatatac ccctaggagc atatgcgtag tacttgattt ttgatgactt 420
 ctaaattttt gcaataagta tatgagttct ttgacta 458

<210> 3635
 <211> 467
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-G2
 <400> 3635

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 caacaatata gttaggacat atatatagtg caggcaatat gaacgagatg gggtagaaat 180
 aaatcactta cagaacgtag caactgatga tagatttgtc gagctcgcgc agattgaaaa 240
 gctggaacaa ttcactcaga tgaatttga catagtaatg tttgaagtga tgctcatatc 300
 taacttcgc ataaatatat tctttggcgt ctttattttt tatgtaacc ttgtaccatt 360
 tcagcagacc tttcatttgt ggaggtagat cctcttcctg cgcaggctcg acgagaggcg 420
 cattcttcac atatggtaat tactacctcc ttcactggcg cctcacc 467

<210> 3636
 <211> 451
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-G3
 <400> 3636

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 aaaaattcaa ggcaacaaaa agcttgggga tgccccgaa ggcattcccct ctttcgtctt 120
 cgtctatcgg taactttact tggagctata tttttattca ccacatgata tgtgttttgc 180
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acacaccttt tgagagagac acacatgatt cagaatttat tagaatactc tatgtgcttc 300
acttatatct tttgagctat atagtttctg ctctagtgtc tcaattatac ctttttagagc 360
acggtggtgg ttttatttta tagaaattat tgatctctca tgcttcaatt atattatttt 420
gagagtctta aacagcatgg taattttctt t 451

<210> 3637
<211> 467
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-G4

<400> 3637

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ggacacttcc attctcaact cactcaagac atggatatct tgcatagaaa catctcaact 120
tcagtctctc aacaggagag ccaactgaaa gtacttgaag aggagatgca atcttttatc 180
accacaaagg gcaaggttgc tggaggactt caaaatcaag taagagaaat gaaagagagc 240
ttcagttcaa ggattacaga attgcatggc tttgctagtg agctcaacct caaatcccaa 300
ctaagctctg agaagctgaa tgcccaagtt agcgcacaca catctgattt ggaggattgt 360
ctgaagggcc tcttagctga tgctgaccaa ttactcattg ggctacaaaa tgggctctct 420
cagcaagaag agagcttaac tacattagtt gagcagcaac atgaagg 467

<210> 3638
<211> 388
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-G6

<400> 3638

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cgtttcaacg ttgctccttt cctgaagacg ttgctgttga cgaatcacga tgttcatatg 180
gtgtcgtgag acggttggtg cggatatatt ctttctata gtttgccgat cactgaactg 240
atcacttttag ttttatttct ttcgattgct cgctcaggca taactttggt cttatatgac 300

tttgccaatt gctggcatgg tttttgtgtg ggttgggtgct tgctgtgtgc atcctaactg 360
 tgcagatgcc gggtatgtgc tcatcatg 388

<210> 3639
 <211> 457
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-G9
 <400> 3639

ttcccgcgctc caccatttac aacgaaatca aaacctacac catagctttt ttgttacttt 60
 caggtacgaa ttgatgtgtg cggcacggta ggcagtcctc gttcatcctc ctgcaccaac 120
 agacaaaagt aagcagagca aattagtata ctggttgaca agtgttgaca ttacaatcag 180
 ggggggaatc catgaataaa tcatgagcgt gacatggaca tcattgataa cacactaatt 240
 acgatctaac agagcatgta ctacgcacat agtagaaaca tctacgcata tcgctagtac 300
 tgctacaaca gaaagaaaca tgagaggaat aagcgatgta taccgcggcg gcggtgacgc 360
 agcagccgcg tcatcctcgg cggcggcacg gtcggtgtcg gtcaacatgg tgatgacgaa 420
 ggtagatgaa cagacgcgtg tggagagacg tggcgag 457

<210> 3640
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-H1
 <400> 3640

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 aagggcgcca gcatcatccg ctacaagcaa tctagccaca gatcaaaacc aaagatagat 120
 gcatgttgag ttaattgtaa aatcttgtca tccgcatggt ggtgtcagca aggttattgt 180
 tgcgtttctt gggaatgtaa gattagctgt gtgtttatgt tgtagttgtg agatgattac 240
 ccttgctcct atgagtgatg atcttgtgat agggataaag ttcataagag gggttcgcctt 300
 aggttttggg cagtttaaac ggaatagccg gaccctgtag gtatcttgat gcataatgat 360
 ggtaatcagt tcatgggttt gcatccaaaa a 391

<210> 3641
 <211> 450
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-038-Q1-E1-H12

<400> 3641

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 cctcagccct gaggggtgat tactccctcc tcatcgtggg ggccgtcggg atgatgagga 120
 tggccaccgg tgatgattcc cccctccggc aggggtgccgg aacgggggtcg agattggatc 180
 tcgtggatac agaggccttg cggcgggtga acttctgata tagggctacc ccgaagggtt 240
 ttggaatatt tggaatttta taggggtgaag aaggggtgctg ggaggtcacc gaggtgggca 300
 caaccacat gggcacgcct gggggccag gcgcgcctg gtgggtgctg ctctagccca 360
 tcctgggtgt tctggtcnaa aaaaattgtc ctangagtta cgcggtgttt ggtctccgtt 420
 tgatattgat ttcctgcgat gtaaaaaaca 450

<210> 3642
 <211> 398
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-H2

<400> 3642

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 aaggcatgct gctgcaatcc tatgacctgc ccgagtggct ttatctgtta tctgtctgtt 120
 tgaacatttg ctttgtggtg tttgttttac aacctgttgt gttgtaagaa ccttgtatgt 180
 ttgaacctgt tatgcacctt ggtaatatg catgctatct ggttatctaa aaaaaaaaaa 240
 atggaaacta ataaaaaaag aaaaaagttc acaagaaatg aaaaaataa gtaatgaaaa 300
 aataaaaatg aaaaatccgg ccacaaaaaa gtaaagtaac gcataaaaaa atgcggcccc 360
 tcaaagggtt tagccttcaa ttccccgtaa aagcaaat 398

<210> 3643
 <211> 462

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-H4
 <400> 3643
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 ccccaattgc ccccgactc aggaggatcg tcggagatgt cggacaccga tgagcaccac 120
 ttcgagtcca aggccgactc cggcgctcc aagacctacc cgcagcaggc cggcgccatc 180
 cgcaagggtg gacacatcgt catcaaggcc cgtccctgca aggttggtga ggtctccacc 240
 tccaagactg ggaagcatgg tcacgcaaag tgtcactttg ttgccattga catctttaat 300
 ggaaagaagc ttgaggatat cgttccttea tcccacaact gtgacgtccc ccatgctgac 360
 cgccaagatt atcagctgat tgacataact gatgatggat atgtcagcct tctaactgag 420
 agtggcaaca cgaaagatga cctgaagctt cccactgatg at 462

<210> 3644
 <211> 374
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-038-Q1-E1-H5
 <400> 3644
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 agatatttgt gaagaccctc actgggaaga ccatcaccct ggaggtggag tcgtctgaca 120
 ccattgacaa cgtgaaggcg aagatccagg acaaggaggg catccccccg gatcagcagc 180
 gtctcatctt tgccggtaaag cagcttgagg atggccgcac cttggcggac tacaacatcc 240
 agaaggagtc cacccttcac ttggtgctcc gtctccgtgg tggccagtaa agctcctggc 300
 gatggagctc tgcttcggtc tctgggttcg caaatcccgt ctttgtttct gtactgtaca 360
 ttgatgcagt gtta 374

<210> 3645
 <211> 447
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations

<223> Clone ID: LIB103-038-Q1-E1-H6

<400> 3645

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gccttcgacc accggcatgt caaatagccc gggttgtggc gttattatct gtaagatggc 120
aattgacata taaatcaggt tccagtgaac ataatccgta ttcagtgttt gctttttcta 180
aagaactgaa ttttgcttct tcggttggtt cacacacgca cctcggcaca aattgccagg 240
ggctcgatac ggcaacaaat gaggttgccg caagtccgaa cagctttata gcacacttcg 300
acgtcacgag tttggcctta tatgcaccag ctccgaatca tgtctttggg caatagttgg 360
gttgcccggc tcttgtgctt actatcttac gttccgctat atcggctaag gtagtaaang 420
gagaactact gtgattgtgt cctgggtt 447

<210> 3646

<211> 421

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-038-Q1-E1-H7

<400> 3646

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aaatattcaa gcctactgat gacagcacc tcagtgtctt ttctcctgag aagaagggtgc 120
gaaggatcag agactcccc ttcaacaaga agagcggctc ggttctgcac agaatggcga 180
gcgcttcaac agggacagaa gatggtgagg ctctccctc cggcagctct gccgagccag 240
ttgcaccgag aaggacaaca agggagagga aggcggcagt agtctacgtc gcttccgaga 300
gtgaagacga tgagactgag gatgaagatg tgtcggaacc aagcgatgat gacttctccg 360
aagatgacta gactccttgg ctcaaccgcc caaacattgc gtggagtaaa gtgactagtg 420
t 421

<210> 3647

<211> 322

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-A1

<400> 3647

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tcaaaatgtg gactccgccc tacgcggggc cactacacag agtgatcggg caagccactg 120
acccgacggc aacatcggcg aagacgagtt cagacggttc ccggcagggg acgagggaaa 180
atgttcagag ttgagaccga ggcgagccaa tgctcgatcc aacgatccaa tggcacatgc 240
ataacggtca cttgaatgcc attagacccg gactaacgcc gttttcagca ggtctaccat 300
agagctggtt ttgtgcaaga at 322

<210> 3648

<211> 445

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-A10

<400> 3648

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tcccttcaga catgggcaga gaagctgagt gggcaggggtg cagagatcac atcatcgcaa 120
ctaaagaatt ggctgaacaa cagaaaagct aagctcgctc gtatcgcgaa agaaagagga 180
gtgccatacg agggcgaggg tgctgacaag tcatctacac cagctaattc tcagttgggt 240
gactcctcag agagtgccgg cgaggagagc tatttgccgc cttcaagggt gctgaatgct 300
ctaggcttat ccaactccaa gggcagcagc aggtcgtta cccagactc cagcgagcca 360
agtacacaag acatgatgac gagccgcccc ttcacaagat cattgtcatt cgagcctggc 420
cgccccgttc tgctgattga caacg 445

<210> 3649

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-A11

<400> 3649

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gctgccagga attcgacctc cgtctcgat cagcgagcaa gagactctaa cttcgccggc 120

tgcggcgcca gaatatgatt tgccctctgcc tccacgcct cgactgatgc agcatgagga 180
 ggatggaacg cgataagatg atctgtctct gcctccacct ccaccactgc cccatcatga 240
 ggctggagcg ccacgttcag cgccagatgc aggaaccgtc gatgacaagt gtgcaagatg 300
 tggcgatgac aattgggtca ggaggcccg atgacaagtg ggtcaagtgg ttgcatacgg 360
 cgtggaatcg aactgaactg aactggctgt acatagatgc tcgt 404

<210> 3650
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-039-Q1-E1-A2

<400> 3650
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 gcggagatcg ggcacgaccg gtgctaaagg aattggcatc gtcagttgat aattaagttt 120
 gcctcgttat ttaatctgct gggcatattg actctgtggc taaggggctt gtttagacgg 180
 cctcggggaa tgtatTTTTg tgcagaggat catggtgaaa tgatgttcat ggtgtacaac 240
 tggccagctg attagctatg cattggttct tgtccattca ttgatttggg attctgtagt 300
 tcaactcttc cagtgtgtct taaagggctt cgttcttgcc ttcgagctgt ctgtcacgcc 360
 gtcgccatca cctattcnct cgccacgcgg gacacagaga tgggtgagga cgccaat 417

<210> 3651
 <211> 220
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-A3

<400> 3651
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 gaccgtcggg ctctaacaga gatccgtttc gtcgaattag cggtacacaa caccctccc 120
 gatcaacatg gacactgttt cgagcgtaag acgtcggtag cgaccgtact gcagcaggcc 180
 atacacgtcc ctaatatcac gaaacaggtg tcagctgtac 220

<210> 3652
 <211> 363
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-A4

<400> 3652

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 caattaccgc atgatgaagg aaaggctcgt cgggtgtctcc gaggagacca ccaccggcgt 120
 caagagactc taccagatgc aggagtccgg caccctcctc ttccccgcca tcaacgtcaa 180
 cgactccgtc accaagagca agtttgacaa cctttacggg tgccgtcact cgctccctga 240
 cgggtcttatg agggccactg atgttatgat cgccggcaag gttgccgtgg tctgtgggta 300
 tggatgatgtt ggcaagggtc gtgccgccgc acttaagcag gctgggtgcc gtgtgatcgt 360
 gac 363

<210> 3653
 <211> 336
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-A5

<400> 3653

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 tcaccgtttg ttagagagag gcgctccgga gtcaactccg ataccacaac tggcatcatg 120
 cgatcctatt aagtgcacga cgtaggcact ctcgctcttcg atgcaattaa ctttatgact 180
 ccgtcagttg atcgagtttg acaagcttta cggttgccgt cacgcgctcg atgactgtct 240
 taagacggcc actgatgtta tgatcgacag cagggttgct gtagtctgta gttaggctgc 300
 atttcgccat ggccgggttcg cttaacctag acacgc 336

<210> 3654
 <211> 424
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-A6

<400> 3654

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 cttcacttat atctcttttag agcacggtgg tggctctatt ttgaagaaat agatgaactc 180
 tcatgcttca cttacattat tttgagagtc ttaaataagca tgataatttg cttaaataat 240
 cctaatatgc taggtattca agattagtaa aaaaaatctt atgagtgttt tgaataactaa 300
 gggaagtttg atgcttgatg attgttttga gatatggagg taataatatc aaagtcgtgc 360
 tagttgagta gttgtgaatt tgagaaatgg ttgtgttgaa gtttgcaagt cctgtagcat 420
 gcac 424

<210> 3655
 <211> 395
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-A7
 <400> 3655

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 tcagattcca gtcctttggg tgactcgggtg gctcgacgta agggaaaaga cagtctctcc 120
 gtctctgaat ggagatgccg cctacttcca aacttgcccc gttggcgcac tcgttctggg 180
 ggttcaggta gaaaatctct ctgaagagca acaggctggg ctcttcgccca agataaacct 240
 cgcagaacac ttggaaattg catatgttgg acaccgagtt gggctctata tcttgtggcc 300
 gcacgtcaaa gaagttcagc acgtctctaa agaactttga gccgggcggt gcgaagcccc 360
 ggctcaagtg atccgcaaaa atgaccacct ccccg 395

<210> 3656
 <211> 350
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-B1
 <400> 3656

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 cgggagccgg cgagccggcg cccactcac tctctctccc cccgtctacc gcacgcctcc 120

gccaggccat tcccatatgc tcttctccgg cgagggcaac agagcatgat tctgtggcag 180
 ggttgaatgg cggtgagttc gggatatacg agactgtgcg gagcaggggt tattaataaa 240
 ttgtgcaaga ggcgatcctt ggccgagatg gatgccgttg ttgatgttgc cgatgctatg 300
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<210> 3657
 <211> 332
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-B11
 <400> 3657

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 gtacacgagg gagcgccatg tgattgtccg caatgcttca gctgaactga accgatggag 120
 ctaccgtgga gctctcaggc ctgctgatgt gtgtgtatag gtattgctaa gagtgcattc 180
 cgtttcatga agaagtttgt tgcttcgatg aaacatgagt tgtagttgta tcagctagag 240
 ctgtagctgt agccctgagt tatcttgtcg aactgacaat gtaacaccgt atatgcattc 300
 atgaatcaat tgggcgttct gcatctgagc ag 332

<210> 3658
 <211> 470
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-B12
 <400> 3658

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 aaccggtcct taagggttac acagggaaaa ttgaagtatt ttctacaaag ccccggttca 120
 tatcaatact ataaaccggc ccttggggac tactggaatt agtagcacta aaccggttat 180
 aaggaagagt agttatacag aaatcagcag tgtttacctc atatcgctcc ttcattcatgt 240
 tcaataaccc ggcttcataa tcacagctgg tgtacaacca gtttaaaaac ccagagtgga 300
 tatcttgggc gctgagatgg gcataacttt ctggatccac cttccacttg cccttgtcta 360
 tagcagaaaa ttcttctttg gcgctatgtt ttgacagagc agtgggggttg ctggggggccg 420

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470

<210> 3659

<211> 358

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-039-Q1-E1-B2

<400> 3659

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tttgctggtc cccgtatata tatatagttt atatattcgc aagactgtta tatctgtcgt 120

ctcttgccg gagactggaa gttgaactgn gtttgctgct gctggcagtc gttttgggtc 180

ggaaccttgt agttaagtta atcccgtacc gtacccctg gatcttggat gttatcaggt 240

aatagttatg atgattgtgc ttggaactaa aaaaaaaaaa aaaaagaata aaaaaaaaaa 300

agaaaaacag acgtcaata agatcaaac ttaagataat cgtgcaagct aaatcata 358

<210> 3660

<211> 362

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-B3

<400> 3660

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ctagtctggt gctcgtcgt ctcgcgaggc ggcggcggag ggtttgcgtc ggcgtctctg 120

cgagctaggg tttcgggtcg aggaagagcg agatggagga ggtgacagag ggggtcaaga 180

acctggccgt gacggagccg cacaagaaga tccggatcca ggtctccaac acgaagaagc 240

cgctcttctt ctatgtcaac ctcgccaaga ggtacatgca gatgcataac gaggtggaac 300

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at 362

<210> 3661

<211> 276

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-B4

<400> 3661

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ccccaacttg ccccaaatgg gacattatth taacaacggc atgtggatgc cttccaaggc 120
aaccagggtca ggttccataa tttccaaacg cgthtttggat taactaaatt ataaaaccca 180
tgtataccag tgtcaggggc cgagagacgg tggcagggth tttgacacac actcacatct 240
cgtgcatgag acatacccat gtacacaacg aaacac 276

<210> 3662

<211> 413

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-B5

<400> 3662

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gcgctgcagc cggagcccat gcaaaggctc gagaaggacg acgagttcct gcaggtcgcg 120
gctgcctgat cacctgcacg ccgctgectg caatatthtag tgagcttaat taatcaaagg 180
tttgtgattt agccactthc gttgatcga tcttacttag tgcgtgtgtg tttgcttght 240
actgctgcgg atctgttccg gctaaataag gatcgatcga ttagtttgtg taagatcacc 300
atcctatttg tctgtgcatg tcacacaaat agccatgtaa tgccatgtag tagcatgtaa 360
tccacctaca ggatttgcath atttgtttac acgtactcgg ctcattccctt ctg 413

<210> 3663

<211> 408

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-039-Q1-E1-B6

<400> 3663

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tgggctagct cgccaataat cagcaagta gctagtcccc gaagacaacc actacatgcg 180
 tgtggccaaa acatatgtat ggagaggtgt gtttttgagt agacaatgga acaactttga 240
 tgtggcacca tgatttcgaa ctagaaatcc ccacaccgag tgagggttag gttgacgatg 300
 catatgtatg ttacaccaca cttcaagccg acgataggga ttcatgcatg catgcatcca 360
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<210> 3664
 <211> 266
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-039-Q1-E1-B8

<400> 3664
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 tgtgatgata caattgtgta acaactccct gtgtttggaa ctctgtctgac tgagggtgcc 180
 gtttcttcta tgcaatgtca aactaatata ttggtgtgtg tttttccgaa actagcaata 240
 ttgttttggg ttaataagtg gtgtcc 266

<210> 3665
 <211> 470
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-C1

<400> 3665
 ggggcgcgg gattacctct ataagcattg ttattaaaat tatttcgcga gacaaaattc 60
 acatctacgg aatcactatt ttgtcaatc aaagtagaca aaggcacatc attaagatca 120
 ataggagaat ttaattagc aaccaatttc ataagagcat caactttttc actcaaagaa 180
 tttatttctt caaccaaatt aaccttttta ctagtaggtg ctctttcggg atgctattgt 240
 gaataatttg ccataatatt atcaagcaat ttagtagctt cacccaaagt aatttcata 300
 aaagtaccac ccgcggcgga atctaaaaga tttttagaaa caaaattcaa tcccgcataa 360

tttttttgta taatcatcca aagatttaaa ccatgtgtag gacaatttct tagcatcagt 420
 ttcattcttt cccaagattg tgcaacatgt tcaagcctga aattgcttaa 470

<210> 3666
 <211> 468
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-C10
 <400> 3666

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 aaaaaacatc caatcaagta aaaaaggatg tacaacgtta tttttctaac agaaaagaaa 120
 aaagaaaaat gagagagatg tgaaaccctt ctgtcaaaaa ttataatcg cagtatcaaa 180
 ttacctttta ttttttagtt ttttgcagga aaatttacct tttattgaat tagagcatag 240
 gtgaattatt gtgtgagata gaaatggaag ttaaggtagt aagtgactga tcaagttacc 300
 tgcggtcttg caggtagtga ttaatgttgc aaaccagctc ctgctcatcc tggctctcgc 360
 catcttctga catggtgatt tcggatgtcc ccgtagatat tgacgctggt gctatagctg 420
 cttgtttgtc gatctggcaa agaattgtgc tcagaagcac cttgatgc 468

<210> 3667
 <211> 450
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-C11
 <400> 3667

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 gagtctgtgc ccgtgttgcc attgggcagg tcctcctttc tgtgcggtgc aagcccaaca 120
 atgccatcca tgccactgag gcccttcgtc gtgccaagtt caagttccct ggccgcaaaa 180
 agatcattga gagcaggaag tggggcttca ccaagttcaa ccgcaatgac tacctcaagt 240
 tcaagagtga gggcaggatc ttgcctgatg gagtcaacgc gaagctgctc ggatgccatg 300
 gccgcctggc gaaccgtgcc cctggacaag ctttctctgc tgccgcataa tctagcagaa 360
 gtctatccgt tctatcgcaa cttattttac cgtgtggaac ttagattcca agtgcctgtg 420

gtgctatgtt attttgtctg aatgttgtgt

450

<210> 3668

<211> 400

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-C12

<400> 3668

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ctaccatgga accctctggc catctgatgt gtgtgtataa gtagtgctga cactgcagcc 180
tgtttctga ggaaatttgt tgcttcgttg aaattgagtt gtagttgtac tacttaaagc 240
tgtagctgta gccctgaatt atcttgtcga actgaagatg taccacagta agttcattca 300
tgaatcattt gggcgttctg cagctgagca gagtatgcct aggaaactga aaaaagtacg 360
aggcccatth agaggatcta gcttgaagta aacgatgcat 400

<210> 3669

<211> 336

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-039-Q1-E1-C2

<400> 3669

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gcccaggctc cttcgactcc ttcttctcaa caaaggaaat gagggttgtg atgcttggtt 120
tggaattcagc tggcaaaaaca acaatcttgt ataggctgca cctgngggag gttcttcaaa 180
ctgtgcctac agtaggtttt aacgtcgaga aagttcagta caagaatgtg gcatttaccg 240
tgtgggatgt tgggtggaaa gaaaagctca gacaattatg gaggatgtac ctcagcaatt 300
ctgatgcact gatctatgtt gttgattctt tggaca 336

<210> 3670

<211> 416

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-C3

<400> 3670

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ccctcctcct cagccgcgcg tgcattgttc tegetggcct cgcccgagcg ccttcgggac 120
ctcgccggga gaagtcagcc agcgccattc cgatctcgct gggagaagcc agcaggaccc 180
cgccgccatg cctccctctc ccccttctcc tcttttccgc tacctatctc tttcctctga 240
acctgattgg ggactgcga ctggcctcca ctccagatcc gtccgccttt gatcccgat 300
cctccttccc gacgggggtct gtcctccgac actgcgacg ggtgctacgg gattcaccac 360
tctagcgagc aggagtagca cggtggtgtt ggtctgtca gacccccgac caacga 416

<210> 3671

<211> 303

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-039-Q1-E1-C4

<400> 3671

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tttggtantg cgggtagttc tgctttgaag cggacatcac ctcgctcaag taatacatcg 120
gcctctagac cggctgggct cggccttctt ctgggcgttg gactacgatg acggtgctga 180
ccacccgact ggttgtggca atgtaaggga gcatgggctc tttctcagtc ggtgccgcta 240
ngacggggcg cgtggctagc atcttcttca gctcgtgaaa agcttgatcg gcctggtcgt 300
tgg 303

<210> 3672

<211> 195

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-C6

<400> 3672

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acggcatcta tatctagctc gtctcccgct ccgttgctct catcaaccag aaatgcatgt 120
 caataacaag gatatcaaga agttcgtgga ggcgcatccac ctcagcgaca atggcgccat 180
 cagagaggac tatac 195

<210> 3673
 <211> 367
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-C7
 <400> 3673

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 gaaataaagc gcatgactgc tgagtttgat gcgagcatgc tggagatccg caagaatttg 120
 gatgctatgg atgaaattga gaggcggagt gcggaggact atgagaagtt ccgtaagaag 180
 ctaaacaata ttgagaaagc atgcaatggt gctttgatcg tgctgggtgcc tagcactggt 240
 ctgcttttta tgtcactgta gtatcatctc tattagttgg ttataagaaa cccttattta 300
 actagtgggt taagaaaccc taccttcaga actctatgtg ttgtagtgat ccagctttgg 360
 actttgc 367

<210> 3674
 <211> 409
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-C8
 <400> 3674

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 ttggagctat atttttattg ccacatgata tgtgttttgc ttggagcatc gggatatgata 120
 ttagtctttg ctttttagtt taccacaatc atccttgctg tacacacctt ttgggagaag 180
 ccacttgat tagaattttc tagaactctc tatgtgcttc acttatatct tttgagctta 240
 atagtttttg ctctagtgtc tcacttatat ctttttagagc acggcggtgg cttaattttt 300
 acgaaattgc tagtctctca tgcttcactt atattatttt gagagtcttt tagaacagca 360
 tggatattgc tatggttata aatttggttc tagaatgatg agcatccaa 409

<210> 3675
 <211> 457
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-C9

<400> 3675

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 ccaatggcgg accagctcac cgacgaccag atcgccgagt tcaaggaggc tttcagcctc 180
 ttcgacaagg atggggacgg ttgcattacc accaaggagc tgggaactgt catgcgttcc 240
 ctggggcaga atccactga ggcagagctt caagacatga tcaatgaggt ggatgctgac 300
 ggcaatggaa caattgattt cccgaattc ctcaacctta tggcccgcga gatgaaggac 360
 actgattctg aggaagagct caaggaggca ttccgtgtgt ttgacaagga tcaaaatggg 420
 tttatctctg ctgctgaact gcgccatgtc atgacca 457

<210> 3676
 <211> 396
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-D1

<400> 3676

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 cagctacttc agctgatcac tcaggggtgc cgaatgctct agcggaaggc actgcgacca 180
 aaacagctcc tccattgagc tcccctcttc ggctcagaag aactctgcgg tgtcagcaac 240
 actcctcggc agatccgcaa acgcgcctga agaactccaa actcgggtca gcatgatata 300
 tctcttactg gcaaatttac tctgcagaag aaaatcctta ccagccgcta tctgcttcgc 360
 ctgctggatc tctggcgg cgctctggga ctcaac 396

<210> 3677
 <211> 455
 <212> DNA

<213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-039-Q1-E1-D10

<400> 3677

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cggcgagagc agcccgcgc tcagcacgaa cttagcgagt gtcagccatg gatgcgatga  120
tcgatcgaac gcggaacagc anaagaaaga ttccggcgca cccctacctg gcgcgcaaaa  180
tgtcagatat cgggttccgt ctaaaccctt aaggttcgaa ctctgggggtg cgcgcggaga  240
tctcctccta ccaatccatg cccgaactcc tcgctacgaa tctagactac ccgatgaaca  300
acacaagggg cagcaggttt atactagctc aggccaccgt tgtggtgtaa taccctactc  360
tagtttgtgg tgtggtggat tgcctctggg actgatgatg aatagtacaa gggaagaaca  420
gcctcgcgag ggatgtgttg gtgttctgct tgggg                                     455
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<210> 3678
 <211> 442
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-039-Q1-E1-D11

<400> 3678

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agctcgtctc ncgctccgcc gccctcatca accagaaatg ccacgtcaag aacaaggata  120
tcaggaagtt cttggacggt atctacgtca gcgacaaggg cgccatcaag gaggagtaga  180
gtgcgaaaac cgtcccagaa gccgtgtttc tgcctgccgt gtttcatcgt ctttgtgtcg  240
tggttgtgat tttgaacttt ctctagactg aattttgtag tggagttaat tagggatgcg  300
ctatgcaaca tgttatcttt attatcctac atattgtcac cgtgagaatt ggtacgatgc  360
ttatcttccc ctaaagggtg atgacttcag gtatttgaag ttaaacagg acatgaatgc  420
gctgcgtgtg ctgtactgtt aa                                     442
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<210> 3679
 <211> 80
 <212> DNA

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acttgacagt atatccctaa agctgccctg 390

<210> 3682
<211> 448
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-D5

<400> 3682

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atcggtaaga gacatcatag atcgccacat atctaacaga gtgcgattac gacgttcgga 120
cacaccatta cgctgaggtg ttccaggcgg cgtgagttgt gaaacgattc cacattttct 180
taagtgtgcc ccaaactcgt gactcaagta ttctcctcca cgatctgac gtagaaactt 240
gattttcctg tcacgttgat ttccaacctc actctgaaat tccttgaact tttcaaaggt 300
ttcagacttg tgtttcacta agtagatata cccataccta cttaaatac cagtgagggt 360
gagaacataa cgatagccac cgcgagcctc agcactcatc ggatcgaca catcagtatg 420
tatgatttcc aagaagtccg ttgcgcgc 448

<210> 3683
<211> 181
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-D6

<400> 3683

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ccgtcgcaat ggattgttat gactactgtc ttgtttggtc ggtcgtttta agatatttgg 120
ttgtcttgta atcggatata ttatgtgctc cagaacatct gggatgagct aaactgagcc 180
t 181

<210> 3684
<211> 325
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-D7

<400> 3684

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tgcaaccctt ctttgtactg tttagtagac attttgatgt gccagtggt gctcgcatc 120
ataggatagt tgattgaaca tgctcattct aagtttctag tgcattgttt cttgagaata 180
gttgcttttg tttcagtgtt tttgacagca tttcagtaca cacccttttg gttattgtcg 240
caactttctg ttaataagaa gatagagcca agagaatata ggggtgctttg ttcttagagg 300
aaactttaat cctatattgt tcaact 325

<210> 3685

<211> 342

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-D8

<400> 3685

gtctggaatc agcattgcac gagatgtcat ctgaatccag agaggcgac gatataacc 60
tcatcaatca ggaagagata gatcatgctc gggcacatgt agacgatctc aacaatagtc 120
tgcataatga caaggtgagc tatgagggtga tgctcaatga agtaaaactac gagatagttt 180
gcctcaagaa gtccgttgag agaattgatg cagacgctaa taacgtgtct gatgaatgtc 240
agtcgccaga gctaggtttt gtcaactcaa ttatgaagtc gtaagatgag atcgtcacga 300
tcagagtgc taggttgaac tacttgggcg tgggtgatga aa 342

<210> 3686

<211> 451

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-E10

<400> 3686

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ctactcgtcg atggatcacc gggcgacgat atcctccagc tccttcttca attcctccgg 120
acttatctta aaagcagcca cggattcctc cacctcctgc tcgcgcttga ttccggagctt 180

cctcaagtca cccatcagtt cctccacgac cgctgttagc gtcacccca aggcactgct 240
 ctgctcatgc agcatcttcc cagccggcgg cctcctcctc cttctcggcg agtccttga 300
 ggatcttcgc attgtcaccc atgagttgct cgacgaggcc ggtcgccttg tcaaccaggc 360
 atcgtgatc ttgagcagct tcatcaagcc atcgaccagc tcctgctgct tagtgacgcc 420
 agcgagaatg tcgtcgtcgc cgaccaaaga c 451

<210> 3687
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-039-Q1-E1-E11

<400> 3687
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 atcctgacac caatcagatc tgaatctcgg tcagatatga tgattggaac atattcccaa 180
 gagttataac aatgggtttt atgtgaccgg gtaagggtgtt ttcattgcta gcacacttgg 240
 ctggaggacc tattgttata gcttacttct agcaagggtta tctattcttc cagaggaaa 300
 tggaagact tattctataa gttcttctg atgaatcctt tgtgtatcca aagtccgacc 360
 tttgcttgaa gaccatgtta atgctatctc gaaacatgtc aaagggtactc cgattttcaa 420
 caaganaatt taaagcccaa tgc 443

<210> 3688
 <211> 440
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-E3

<400> 3688
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 gaactggcta aagacggaaa aaggaattaa cctgcgggtc aaaatgtaaa gaaagagaaa 120
 gagaaagatg ggaaaaccgg gattggatgg aaaaaccaat tggactgcgg aaacaattgg 180

tgggtggacaa ggatagtttt gcaaaatgat tttgtgacag aatttgcact aaaaaagcta 240
 aaacgacata tatttaggta caaagggagt attaccgaaa aaggctttcg ccccgcttaa 300
 tattataaag ccaaccgcac attaagcatc caacaaatcc aacacacaac agacacacac 360
 acggaggtcc acaggagcca aaatagtaca acaaagggtc acaactgagg gcacatcaca 420
 acaagcccta aacccaaaaa 440

<210> 3689
 <211> 235
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-E4
 <400> 3689

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 tcttaagccc gaaatattcc atggccacgt atttcgaccc gaaccgtaac tccaagatag 180
 actacacaaa tgtcaagaaa gttcttgatg atgttctccc cggctatgcc aaatc 235

<210> 3690
 <211> 223
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-E5
 <400> 3690

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 catcagcatg gcatggattt gtgtaaaaaa aaaataaaca aaagccaagt aaatcaaccc 180
 aaatacgtaa caccaacata gactacacaa atgtcaagaa aag 223

<210> 3691
 <211> 413
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-E7

<400> 3691

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tcaccgccag acccccgtc gccaacggca ggtctggaat gttgccaatg tcgagccctc 120
cagcaaatcc aggacagctt accatTTTTT atgggtgggtc agtatgtgtg tatgactcag 180
tgccaccaga gaaggctcaa gcaatcatgc tcattgcagc agcagcagct gcggcctcaa 240
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ccatgcttac gcggtcgtc tcacttcaga gcacttctgt agcaaatgga gaacctcagg 360
ctgtcgcgga ttctggctcg atttgcaagc ttcaggctga tcttcccatc ccc 413

<210> 3692

<211> 326

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-E8

<400> 3692

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ttgagcgggt ctggtacaca ccgacctatg tagcttctgt gtctgtgttg tttgatgtct 180
catacggtag aacattgaac ttctaattgtt gtttcctgcg ttgtgcaagt agtcttaaca 240
tttcggtgtt gatgtccgtg tttattggac tgtgatacat tacagaagca aagggtccca 300
aaaaataaaa aattggccgc cctaaa 326

<210> 3693

<211> 421

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-039-Q1-E1-F1

<400> 3693

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taagcgaaaa tttttttaac attaatagca agacgggacc ggatatccac atcaaccgca 120
tcaaaatggtt cttgcatana taatcactct ctcttatctg atanacatct tttttagaca 180

cctgattctt ttgcgcttga ttctgttatt tcttttacag gctggaggaa acactaatta 240
 acatgtatct atcaggatac tctaatatag aggtcaacac tganaattta ctaagagaat 300
 cacagataag tgaggaaagc anaagtgatg cagttgagaa caaactcagt aacgtggctt 360
 cagataatgc atcagactct ctgaatgatg ctacattaca gcaaataaaa gataaaatgc 420
 a 421

<210> 3694
 <211> 435
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-F10
 <400> 3694

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 gggccataaa acggagctgt cgctctgatt tccgctgac tattaaacaa agaagcataa 180
 cggatagctt cgttatgaca ggtgacatca ctccggttta caacaatcag agaagatgac 240
 atcatggcgg ttaccaatt tataagaaga tggtgaagat gaagctttta ttaaaggatt 300
 gacatgaacc cgttcaaata aatctagggc ctaatcttgg ggatattact actgggcgta 360
 aaccggctta tctgggccgg gttaacttca tcagtagtta agtaagttaa agcccaagaa 420
 gacagaagag ggctc 435

<210> 3695
 <211> 344
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-F12
 <400> 3695

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 gatagaacga ctgcttcatt cacaacatca tgtctgatcg ggtttcactg cattcagtat 180
 totctcaatc acggcaccga tggtgaaaac ctcagcatct gtcgtgtaaa ttgcacttct 240

tattctacca caacacatgc gtataatgtt tctaacgcag accgctatcc tgaacttcaa 300
gtgtagtggtg gctcatgaat ggagattcag atttgagctg atcc 344

<210> 3696
<211> 430
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-039-Q1-E1-F3

<400> 3696

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cctggcaaag gcaaaacaat ttaaattccaa gaatcctttc cggcctcaaa atatgaaagg 120
atcctaagta aaagttggat ttttctgaa tccaacctgt gaaattgtta aggagtgtct 180
tccccctgtc cacaagaagt taaagctctg gaatccacaa agaaagtctt gggatgttaa 240
ctatgtctac tacagcgaac gctgtggtgg cggtttgagt ggttgctggg gcaagttttc 300
tctagacaat aatctggaga agttcgacgt gtgcgtcttc gagctcttct cgaaggacaa 360
cataaaagta cacatctaca gagtcgtcnc agaaataacc cattcctccc tggctcctggc 420
aagaaataac 430

<210> 3697
<211> 196
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-F4

<400> 3697

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caggcggcat cadcaagcaa ggagctagct taaacagatc cggcctgagg tctttgagta 180
aacggtacag ccccga 196

<210> 3698
<211> 435
<212> DNA

<223> Clone ID: LIB103-039-Q1-E1-F8

<400> 3700

ccggggcgcc gggagacgga ggagtctaag gtggagtaga aggatgcggc tgctggagct 60
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tagaattatc gttgcttagt attacgattc tctagcagtt ctgctcgctt tatatatccc 180
ctactttctac atgtactcat tgtacatagc tcgcccccat ttgtactcgt atactatctt 240
aaagaatatt cgtcaaagct aattgggtgat catcgtg 277

<210> 3701

<211> 403

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-039-Q1-E1-G1

<400> 3701

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taagatggct ttagaattag cgcgcgttag gataaagcgc tactactaaa tgccataata 120
gtagcacatt ttactccaga cgcgctactg ctatacctat agcagtagcg ccttcttcga 180
aagagcgcta ctactaaggc taagcatgta aaaataaaca taaaatacat ttctcatcaa 240
tgatctcttt gtgtagaatc tgagttgtca atatgagtcc tgcccgggtt aagaaccggt 300
gtagacttat attgagtcca caaatcctac acatagagtt caatgaagaa caagtggctg 360
tgatagtttg agaagtaaca tatttaaggt ggtanacacc ctg 403

<210> 3702

<211> 408

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-G10

<400> 3702

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tatgataata acacggtctc aaagaaatta aatgaatgga ggagtaatga tgaagctgtc 120
aatgggggaca cacaactatt gttggataag tagtcctaga ttccatatca tttgtagaga 180

taatgatggg tgatagatcg attgcacaca agcagatatc ctgttttgaa caaaacacag 240
 ttttggacaa atagacctaa ttgtgtgtgc agaatactaa tggttgatgt atcaacgacc 300
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<210> 3703
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-G11
 <400> 3703

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 gtcgtcctgt gtatctgatt ttttatatta aaaaacgttt ttccaatttg tgaacttttt 180
 gcaaattcat gaacattttt ttaagttctc aatcattttt caaattcata aatatttttt 240
 atatcaaaaa tatttttcaa attcgtgacc agtttttagaa tttttcgagt tgatgaacat 300
 tttttaaatt ttggagctct cttttgcaat ttctcgaaat ttttaaattt gtgatgtttt 360
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<210> 3704
 <211> 443
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-G12
 <400> 3704

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 aaaaacctag aattagagtc agtaaaatcc tataacctga atagaagaga tatcagaatc 120
 ccagagtaag gacgaggaat aaatgatcct aataccaccc aatggcgaca tgggcccata 180
 agacacacat ccatgttagt aaaactgttt tggatgacta gactcaactt cggccaatga 240
 gttggaaatg gggctaccta caggcagtcg gctctaatac caacttgtga cgccctcgat 300
 tcaatgcac actaatcata cacgcaaata tgtacaatca agatcaagaa ctcacgggaa 360

gatacacaac acaactctag acacaaatta aaataatata agccacgggc ctccaaggct 420
cgaatacata agctcgaata cac 443

<210> 3705
<211> 369
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-G2

<400> 3705

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tccccctcat gtacccaaat tatgcaatga cgtggatggc cactgtaacc atggatattc 180
gaaccagaat ttgtgacgtt caaactcatc acacacgggt taagctatct gaattgtttg 240
tgatgttcac atatcgta caagttctgaa taagggaccg tgtttgatga caccttgagc 300
gccagttttt tggctgaagc gattccagat tttcggcttt cacggaaata tctacctcgc 360
cgccccctc 369

<210> 3706
<211> 315
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-G3

<400> 3706

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ttttctaagg taaatttgat gattgcttaa ggcttggtga ttgctgtttc tgtctttctt 120
ggtaggtgct gttgttgagg agtagaaaac tcatggaagg gtggttgctg gtgagatagc 180
ttggtataac ctctggcaca attgctgtgt gcaagcaacg ccctgttgcg ttctactggt 240
agtgggtgtg gttgtctggt gtccagtgtc taactatcat gttcaaactc aatgtaattt 300
gaagttgctt gcgtc 315

<210> 3707
<211> 76

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-G4
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 ggagcgtgcc aactga 76

<210> 3708
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-G5
 <400> 3708
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 agcccattta cagcccgtca acccaaggcc cgttacgccc tatccgaatt aggcccagta 180
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 ccatgacgtc tttcggccca tatgaggccc tttgtaactc ttggcccatt agcggcccgt 300
 gctgaaactg gcccgtaatg aacagtgtat tactttacac ccattaacgg cctgtggtga 360
 aactggcccc taatgaacag tgtatcactt tataccatt aacggcccgt tattccg 417

<210> 3709
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-G7
 <400> 3709
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 catgacgagc ttgcacattg atatttcgta gcgtcgctcc gtcagctcat ggacagggat 240
 gtggtattac ggagtgcgt gaacacgatg tcatgcatac atcgtggagg gatatcactg 300

caggcacaag gggattgtct caagagaatg tccaaagtca tctttcgtct agacaagtgc 360
gcactcgatc gactctgcac ggagattgtc tcaagggtccc cgccgttaat ggttcagcct 420
tcttgaggag tgggatgttt t 441

<210> 3710
<211> 304
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-039-Q1-E1-H1
<400> 3710

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tcnagtttcg agaggagaaa gcttaactag tggtgctcgg gcatttcgtc gaacacctca 120
tgtgcatang aggtgaacta tagcaaccaa atgccctccc ctcaccggct tgacaaaaag 180
agagaaccgt ggagtgtctt gccagcgggt gggatatatgt aggcaagtta tttgtcccgg 240
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gacc 304

<210> 3711
<211> 428
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-039-Q1-E1-H10
<400> 3711

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agaacgatga aacggttgaa caagcagctg ctcgagaagc tatagaagaa gctggagttc 180
gaggagatat agtgcaattt ctaggtttct acgatttcaa gagcaagacg catcaggacg 240
cgtgctgccc cgagggcagtg tgcagagcgg cagtgtttgc gctgcacgtg aaggaggagc 300
tggcctcatg gcccgagcag agcaccgcc ggaggacctg gctgacggtc cccgaagcca 360
cgtcacaatg tcggtaccag tggatgcaag aggccttgct gacgggcttc tctgagtggc 420

atgacaac

428

<210> 3712
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-H11

<400> 3712

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tcgcacggct tgggtgccggc aaggcccggc ccccggcaga gtctgatgcc accaaggcag 120
tgcccgcgca gtcgagtgag gtgggtgcaga agaagaagat gatgtagcac ccggtttact 180
ttgtcagctc cctcttgagc ggggctaggt cgaggatttc ggggtgtgcaa aagttgctct 240
tcggcctcct tatggcctcg aggaagctgc gtcataaatt ccaagccgac cagatcactg 300
tcgtcacccg ccacctgttg caacggacgc tgcataacct agatgcaacc ggaacgattg 360
tggactgggc cttggagata acaagtttcg g 391

<210> 3713
<211> 382
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-H12

<400> 3713

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ctctaatacc gcgcaccttt cgccggtatc atacaccac catatacctt cctcaaaaca 180
gccaccatat ctacctatca tggcatttcc atagccattc cgagatatat tgccatgcaa 240
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atgtagttga cattgtattt gtggcaaagc tacggttcat aattctttca taaatgtcac 360
tcttaattca tagcacatcc cg 382

<210> 3714
<211> 131
<212> DNA

<210> 3717
<211> 162
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-H6

<400> 3717

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cgaatctcag cccgactttc gggggaatca taatcccctt catcctttca tcaactgaggc 120
aatgctctcg ctatgtggat tatcagactt ttatgtactt ac 162

<210> 3718
<211> 283
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-H7

<400> 3718

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gtttatattg agtctgttct tcatagttag agtcgaagag aaagccatgc accgtatgag 120
ggttagttca gtcacatcca agcaatctga gccttgcata atcatttcgg taattgctat 180
gtcgaagttg cggttgcatc gtcgtgtcaa gttgatggtc ttagcgtcaa gtctttttaga 240
gttacgagtt ctgtacacag gttgtgacgt cgccgctgcg ata 283

<210> 3719
<211> 380
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-039-Q1-E1-H8

<400> 3719

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caaaatctca gaagagaagt ccagctgcgg gcaaacccaa gatttccaag attaagaaac 180
caaaagatga atatgatata aaggaggaaa agaaaataaa gaaggaagtt ggtatcaaga 240

aagatgaaaa gaaggctgct ggggtggagg gggctattgt ggtgaagaag gagagaaagt 300
 tgtatgaatt gccagggcag aaacatgata ctctctctga aagggatcca ttgaggatat 360
 tttatgaatc gctctatgag 380

<210> 3720
 <211> 266
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-039-Q1-E1-H9
 <400> 3720

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 ctgttaaattg gtgttgttgt ggaaaagcat gggatgggtg ctgctggagc ccttgtaaga 120
 cagaacacga ggatgccttg tggagaggta tggggtgga accctgcaag atttctgagg 180
 aagctcacag acgaggagat cacttttatt gcggaatcag ctgccaaacta ttccaacgga 240
 accaaggcac atgctgttta gaatgc 266

<210> 3721
 <211> 418
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-040-Q1-E1-A10
 <400> 3721

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 aatcctcgaa gagtgcagcc ctgcttaccg catcggagag gtgatccagg gcganggggt 120
 tcagtacgtc tgagagccta cacaagcgtc tcaaaacttc taatggttga gaactgctta 180
 gctgatgatg ggcaacgctg cccagggtttt ttcgtaacct cgtgatctat cttacggggc 240
 caagtatcgg agtagaagta gtttactcca gtgagatttg acaaaaaaaaa aacgggaata 300
 acgtttctcg gttegcgaca actcgtctga aacagcttgt gttgctatcc tgaacatcac 360
 ttggcaattg atgtgaatgc ctctagtgtg ctgaattttc ttgagaaatc atatctat 418

<210> 3722

<211> 396
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-A11

<400> 3722

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cgtttctttt gggaaggagc gggacaaaa cagaaatacc atatggttaa atggcaagcc 120
atttgccgtc ctaaagccca agggggcctt gggatcatca actccaagct gatgaacatc 180
gcactaatgt gcaagtggat ctggaaaatg tctcaaggag agactggcct ttggatcgac 240
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cctttttgga actccattca atcncttaaa cccttctttg ccaggggtgc gaagtttggg 360
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<210> 3723
<211> 431
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-A12

<400> 3723

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gtcaaggccg ccgtcngcca acccgacacg ccccgcgact gtcccctctc ccaanagggtg 180
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tccatcactt gtgaccctg ctgaatatgc atcagtggga tcaaagatcc tctccacctt 420
tgtcacgttc c 431

<210> 3724
<211> 401
<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-A2

<400> 3724

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ccatgtgcta cagcctccat gtccatgtcc tccctttctt caggttctac aggggagctc 180
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agctcttggc tctggctgca aacagggacc tggaattcac ctacaacgag aagccgacgc 360
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<210> 3725

<211> 374

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-A4

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atcatgaact cttcatcaa cgacatcttc gagaagctcg ccggggagtc ggccaagctg 180
gcccgtaca acaagaagcc caccatcacg tcccgggaga tccagacctc cgtcgcctc 240
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ttcacctcct cctacgcagc taggattgat cgccgcttca tgaactgatg gccgcatcag 360
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<210> 3726

<211> 438

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-A5

<400> 3726

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 atgacggacc ttctaatacta gtgaagacta ctgacactcc atcaactcca gaaaaggctg 180
 ctggagataa tgaagatgag cctatcatta ccggtattgg ccacacctct gctggccatc 240
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 gctatgaggt aatgacat 438

<210> 3727
 <211> 56
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-A6
 <400> 3727

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<210> 3728
 <211> 419
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-B1
 <400> 3728

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 tattctagat gatgctctcc aaggcttcag ctttagaggt ggccatgtgc agatcaagaa 240
 acaaaggaac aagaagatgg gtttcgcgca taaaactaac ttctcctgca tccatgtccc 300
 aaaaccaagc acgaaggatg gattctacat cgtccatctc atgattcagt tcaacacgga 360
 tcacccaaaag cttcgcatta acagcagaaa tgatgatcgt aaccacaagt ggctagaat 419

<210> 3729

<211> 439
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-040-Q1-E1-B10

 <400> 3729

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 gggaggggaa gagcggaag atgaggcagc tggctggcag tacgagatga aggtgtcgg 180
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 agctggcgac tatgacgtcc aaggcgcagc aagagcaccg ttccccaaact tggcaggcan 360
 gaagggtgccg ctgtcttcag caccaaccct agtccgctg gaaggagcag tgctgggatt 420
 cgccatgatc ccgaacact 439

<210> 3730
 <211> 450
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-040-Q1-E1-B11

 <400> 3730

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 acgacgacga tgatctagag aagataagag aaaggctcgc caaagtgagg tcgtaaaaga 180
 gaatcgatgt gctgacatgt gtataatagt ccatttggtg atgtacgata cacaacttgg 240
 cagatgtcgc ctttctcact cacaaactgc ccagagtcac caacgtacaa gtcgttcgat 300
 ctctgttgta atctgtatgt gaggatcgtc acgtgtgatc aagggtgcct gtattttgtt 360
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<210> 3731
 <211> 439

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-B12
 <400> 3731

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agttccttgc cgatgacaag taccgagtgg tcggcttcga cctcgagtac accatcggtc   180
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tctaccactt ccaccttgcc acaaggcctt gcgagcgttt ctccagggtt atcaacagct   300
ccgactacag tttcgtacg gtggacacca ccaacgatct aaaagcgctc aaggtttcgg   360
acttgaaatg cccgaatctt gtcaacatcc cagcacacta caaggtctgg ggcagtgaca   420
aaagcaaact gaactccct                                     439
  
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<210> 3732
 <211> 380
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-B3
 <400> 3732

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tgggttacct atcgggcatg cactagtaat atttttatta ggccactgtg tctacatct   180
tgctaacttt gctaaagcac ttccgaacga atgcttacia catcaacatc aagttctttt   240
acacgcagag ctctacctcc agtgtgcttc gcttggctac gtggtactaa ctaagctgcc   300
tctagccgtg cacacagtgc acccatgcat gacaaaagct atattggctt atatggcttt   360
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<210> 3733
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-B5

<400> 3733

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taatgctgca agacacttgc tcacactgga tgagaagaat ccccgccgta tctttgaggg 180
tgcggctctt ctccgctgca tgaaccgcta tgggtctcctt gctgagggcc aggataagct 240
tgattacgtc cttgccctga ctgctgagaa ctcccttgca agggcgcttc agactcttgt 300
cttcaaggct ggcatggcaa aatccatcca ccatgcccggt gtcttgatca ggcaacgcc 360
catcaagggt ggcaagcaga tcgtcaatgt cccgctgcttc atggtgaggg ttgaatctg 419

<210> 3734

<211> 409

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-C10

<400> 3734

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atggccaagt actacctgga cgacacggtg gacgtgatca agatgctgca ggggctcgcg 180
agcgcgccgt cgcagcagcg gccgtggccc gtgcagctcc gggtcacctt cgaggaagga 240
aacgggggtat gagcaaaccg acgtgatgat gtcaataacc gatgaaaaaa gaaggacgac 300
gacgatgatg tcaataaccg atgaaaaaag gaggacgacg acgatgatga tgatgattca 360
ggaagtcagt tgggtgtggtt ttaggattag ctgcagttac aggataaac 409

<210> 3735

<211> 295

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-C3

<400> 3735

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ttatcatcag caagatgtag atcacgcata tgtataatat gaacattaat aagaatcacc 120

tcaatacgag gaactctaga gaaacgtcgt agatgaagaa gattaccaag cttacgttca 180
 agatgttcac taagatgaag ttacgaacta gagtacgcag accgagaatg acaatgggat 240
 gatgatgatg aagaagctga agctgaagca gacgaatatg aataataagt ttaat 295

<210> 3736
 <211> 459
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-040-Q1-E1-C4
 <400> 3736

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 attagattcc aatttccttt aaagaaaggc acggagcact ttccaagaaa gaaattcaaa 120
 ttaccttatg aatctatcat gtgtgctact tatgaattta gtgccaaaga cgggtactcgt 180
 tagatctatc cttgctttta tgcctagcta gggcggttaa acagtaccgc tagttgggag 240
 gcaaccaat ttttctttat gtgttttggt tttgctcctg tttagtaata aatcttgcac 300
 ctaccttctg tttagatgtg ttttatcttt taattagtgt ttgtgccaaag tagaacctat 360
 aggataacct acgatgatag ttgatttgat tctgctgaaa aatagaaact ttgcgcgcac 420
 gaatataatt ttgttaaacc atangaacgt gattttgcy 459

<210> 3737
 <211> 418
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-C5
 <400> 3737

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 tctgatgctc tgccttcact ctctgacata catcaciaac tgctacaaac tccgcaatat 180
 ccttcttcat tccgggtccac cagaaagtat tcttcaaata caatacatc ttggtattcc 240
 ctgggtgaat cgagtacggt gaatcatgcy cttcttgcaa aatcaacttc ctgatctccg 300

gatcttttgg cacatatact cgggccacaa accataaggt atcgtgctca tcctcacgaa 360
atcccttggc ttttcctttg ctcatcctct cctttatctc ttcaatctcc ttgtctgt 418

<210> 3738
<211> 188
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-C8

<400> 3738

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gttcacctcc tcatagactg aagatgcacg cgtcccctgt aattggctctc tgtatctgca 180
cctgtact 188

<210> 3739
<211> 431
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-D2

<400> 3739

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gggaagcaag atcctccgca tcctcaaggc tcatggcctg gctccggaaa tcccagagga 180
tctgtacttt ttgattaaga aggctgtcgc cattaggaag catcttgaga ggaacaggaa 240
ggacaaagac tccaaattca ggctcattct tgttgagagc aggatccacc gtcttgcccg 300
ttactacaag cgcaccaaga agctcccgcc cacctggaag tacgagtcta ccactgccag 360
cactctggtg gcttaagagg gctcttcacg ttgtgtgctc ttaccggctt caagatggtc 420
ttgtttotaca t 431

<210> 3740
<211> 235
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-D4

<400> 3740

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tcctacctgg gaacaactgc aactactgct gtgagtcact ggatctagtg ttagtgctgg 120
gtaacatacc ataaccggtt taatcctttt gagacttgtc catctttggg ctgaatgcag 180
gaaccacata gtcaaacctt gcttctcaca cagacggata acgcaactaa cttca 235

<210> 3741

<211> 426

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-D5

<400> 3741

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ggttgagcac ttgagcgtga gagtgtgtgt tgggtggtgtg gtgtactggg gtgtgcatgc 120
atgctgtcgt gtgtgctgtg gagtgttgct tgcgtgcgtg gctgctgtga tacgtgtgag 180
tgttgctgtg gtgctgggtt gcatgtgttt gtgtgagtgt tgcgtggatg cagttcgcgt 240
gcatgctgtc atgtgtgtat aatcaccaca ccagctcctg tgtgttaaaa cagacgactc 300
agcataccaa tacaaggcca ccttatecgt tgtgcccgcg atcatgactt cgaaccaccg 360
tccagatatt ttttgtcgtt tggtttcatt cttaccagca agatgcccggt gcgttgatg 420
taacat 426

<210> 3742

<211> 421

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-D7

<400> 3742

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tggaggtgaa ttgcccttca tgacgatgtg tatcacgaac gtgatggtgg tcgccatgga 120
gatgtggacg tggacgactt gagcttgcac cttgtttgct ctcgaagac ttgtaacttg 180

aatgtcgccg ccttgaggat gatgaagggg aagtagtgat gaggacatga ctaccttggg 240
tatgaccaa aatattgcat atatgcatat ttgtcacgtg atttctagtg caaactattc 300
aataatctat ttatgttatt cagaacataa ataacttcaca cactttttgtg ttttgtctaa 360
ttgcaggtgt atgcgacatt tgtacaatcc acatatgaag ataaggaaga aagatatgtt 420
t 421

<210> 3743
<211> 411
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-040-Q1-E1-E10
<400> 3743

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tcggggaggg ggtatatcga ccccccccc acgtgttgaa gttatcagga ggggggtata 120
tcgacaacga cgacatatat acacgggaaa ataatgttat cggggagggg gtatatcgac 180
ccccccctc gtgttgaagt tatccccct cgtgttgaag ttatcgggag ggggtatatat 240
cgacgacgac agacccgata aaacataaga aaacgaagaa gaaataaaaa gaggagagaa 300
gaagaaagga atagaggaga ggattgaaga aaaaagaaga aaaaaaagaa gaagaaaaaa 360
gaggagaaga agaaaggaat agaggagaag aagaaaaaat agaataatttt c 411

<210> 3744
<211> 436
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-E12
<400> 3744

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gcattccaag ttttagcagc catggcactt acgcttgtgt tctctctct cctcggtttc 120
tgtctcaatg gcgtgagctc cgattcaagc tacttcacct ccttgtttac tctcgagat 180
tcctactttg acactggcaa tttctgac atggctgac cggcgatacc cgagtataat 240
ggcaaccac cctacggcat gaccttcttt ggccgcccc ctggccgcct ctgtgatggg 300

agagtcaccg tcgatttcat cgccgagcag ttggtctgc cactttctca agcctccatg 360
 ttgaatagct cggacgtgtc taaaggcgta aattttgctg tgggtggcgc gacagcgatc 420
 gacatcgact tctatg 436

<210> 3745
 <211> 342
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-E2
 <400> 3745

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 agtctatctt ggagttacgg ttcgggtcga aatacgtggc catggaaaat ttcgggctta 120
 agaggatgag tgtgcaatgt gtgtcactgc acagaagcaa aaaaaaaaaa aaaaaaaaaa 180
 aaaaaaaaaa aaaaaaaaaa aataaaagaa aaacaaaaac aaaaacagaa aaatacaaca 240
 aacagaaaaa acaagaacag accaacagat aaaatgccaa gatagataaa cttcaataaa 300
 aaagcagtta aaaaaaaata cgaaggatcc acgaaagagg at 342

<210> 3746
 <211> 256
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-E4
 <400> 3746

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 gtggtatcag atttccaggt tgctcgggtga gattttacag tttttcgtag gtgacatcga 120
 ttcagtccgg tatacataca gtccacgaac aagccagcca aaaaattaag gttacttcaa 180
 catatccgaa ccaatccgag cccttgcata atccttttac ggtttttgct tggttaaatt 240
 tgcggttgca ccgtcg 256

<210> 3747
 <211> 395
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-E5

<400> 3747

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atctcttaga aggtgattga tccagaaatc ataccaaggc taaggagtga tgtggtgcaa 120
tgtcttgta gtttcgagct ggtgttccca ccattcttct tgaatatcat gacgcacgtc 180
ctagttcatc tagttgacga gattgtcatt ctgggccccg tatttctaca caatatgtac 240
tcctttgaga ggttcatggg agtcctaaag aaatatgtcc gtaaccgcgc taggccagaa 300
ggaagcatct ccatgggcca tcaaacagag gatgtcatcg ggttatgtgt tgacttcatt 360
cctgccctta agaagatagg tctcccaaaa tcgcg 395

<210> 3748

<211> 388

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-040-Q1-E1-E9

<400> 3748

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gangagaagc ttggcgccac actccatgga aaggacgagg aggtggagaa ggtcgtcgtg 120
cagtggacct aagagctgga gcagaggtac aaggaggcac tcaatgcccc ggctctgggt 180
catgccggca aggtgaaaga gctagaggtg gagcgggacg ggctgaagga tcaggccctg 240
aagctggcca aggagaatga cacgctcaac ggtgccctgg tggaggcgca aggtgcagtc 300
ctcggaagg ctgagcagct ctccaangcc aacgaccccc tcaaagacct gaagctgaag 360
ctgganggtc ttgaggagat gctctcgg 388

<210> 3749

<211> 409

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-F10

<400> 3749

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 gccgtatcaa caggaatcca gattgcgctt ggagagtcca acgaacggtt gtcaacacca 120
 tgtgggagggc gatatcgtgg tcgatgtgtg actgatccat cgacgcgtgc gatcccatat 180
 gagcgaacca caaggccctc tgaaactggg cgacgtataa atcttcgtgg tgggaatttt 240
 atgggtacat ggcgacgaat ccaagttggt agatacgagc taatgcataa cgatgggcct 300
 tgatcatcat ctgtgggatg cgggagacaa tcacagtagc attataacgt tgtagtggat 360
 ggggagcttg cttcatggag gtgggtgaat gcaaactggg ggggtgctgc 409

<210> 3750
 <211> 436
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
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 <400> 3750

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 atctttaagg aacaaacttg aattgcttcc acctggtggt ctgattatag gatcccacac 120
 ccagatggac agccgtaaag agaaggcaca tcctggtgga tttcttttta cgaagctcgc 180
 tagtagcagc cagacgctct tcgacctttt ccagacagc tttggtagtc ggttgcacga 240
 aaggaacaaa gaaagcccga aggcaatgaa acatctaaat aaacttttcc cgaacaaaat 300
 ttccatccag cttccacagg acgaagcatt acttaccagt tggaagcaac aattggatcg 360
 tgatgttgaa acccttaaag canaatctaa catcggtagc attcgtacgt ttttgaatcg 420
 cagtgcgacg gaatgc 436

<210> 3751
 <211> 451
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-F3
 <400> 3751

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 atggatgtcg tggtggtggc gtgtgccgta ctctggacg tgaatgcttg ttctggccca 120

tgctacccta ctactcctac tacttactcc tatcagtata tactatacta ttatcgagga 180
 ttcgatgtgc tggttacgta caacgaacac attaacatat ggctacagta taaacccgcc 240
 cgacgcgcga tgcattgtgaa gctagtacta caaatttaga gaagtgactc gaaagccatt 300
 cattaattta ttaagtttat cacacgcata tcattttatt acatacaaca cgtcatcaag 360
 ccacatcgac aacgatgata cattataaat actaaaattt tcaccacaca ttagataaca 420
 cgctatgaca tgaacttcaa cttaaccaat c 451

<210> 3752
 <211> 295
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-F4

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 aatcgaacgg atgctaagat tgcgggtgca tgtgggtccg atcgaaaatg ccttgctcct 120
 ttgggtggac ccgcccgtta ctatcggttc cttggatggg tgccctctgtc atttccatct 180
 tgggtgtccat gtacgtgcat gcctcagact ccttgtagtc ctgaggccct ttgaacgggg 240
 caagccactg gggtagcgca atcgtcacaa ttggccgtgg cttcatagat gatga 295

<210> 3753
 <211> 418
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-F5

<400> 3753
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 gtaccttcct gctatgctta tagcaagaca tacatcagggt ctagtacaca acattgcata 180
 catacatgat agaacctatg gctgaagcat aggggaatgac tttcattttc tctctatctt 240
 ctgcgggtgg cggtgaggga gtccgggatt aaggggtcct cggacagccg gactatatac 300
 tttggctgga ctgttgact gtgaaaatac aagattgaag acttcgtccc gtgtccggat 360

gggactctcc tttagctgga aggcaagctt ggcaattcgg atatgtagat ctcccttct 418

<210> 3754
 <211> 377
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-F6
 <400> 3754

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 ctacccatt acacaactgc accagcacca agtttcacat gcaacatgta gaacctttcg 180
 aaattagcat catagacggt atatagacat atgcatctca tctggaaaac tgctgaagcg 240
 gaaggcgaat attgagcctt cattcatgtt gaaggctttt gcaacttttag gccagtgcag 300
 gtggatgatt gaccgtccgt ccttcacctt cttcaggaac acttcaatat tgaaccgtgt 360
 gtgttgatg aaaattt 377

<210> 3755
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-040-Q1-E1-F9
 <400> 3755

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 gagaagccat cggcaggcga catcgtgtcg atggtgatga agaggaggcg tgcgatgcca 180
 aggagcgacc aacagccctc tgaagctggg cgcgtaaaag cttctggtgg gatttttggg 240
 tacatgcgag aatccagtgg taaacaagag aaggagaagg agggcctggc atcatctggg 300
 gagggggaga aaacacagag caaagaaggt gtggtggtgg cggctgcttc agggggtggt 360
 gaggaaactg gggttgctgc agatgcgccg gtttctgcag agcaggcaaa agcgggtggt 420
 gctgctgttg ttgt 434

<210> 3756
 <211> 371
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-040-Q1-E1-G1

 <400> 3756

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 ataatatcaa agtcatgcta gttgagtagt tgtgaaattg agaaatactt gtgttgaagt 120
 ttgcaagtcc cgtagcatgc acgtatggta aacattatgc aacaaatttg aaacatgagg 180
 tgttatttga ttgtcttcct tatgagtggc ggtcggggac gagcgatggt cttttcctac 240
 caatatatcc ccctaggagc atgcacgtag tgccgaggtt tttgacgact tgtagatttt 300
 tgcaataagt atgtgagttc tttatgacta atgttgagtc catggattat acgcactctc 360
 aaccttccat c 371

<210> 3757
 <211> 404
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-040-Q1-E1-G10

 <400> 3757

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 ccatctggcc gcaccaactt caaagcggat gaagccatac cttcccatg ctaatccgga 120
 attcacagtt ccacatggag gtggtcgccc tgattttgct gagtctgcac aagtccgcaa 180
 ggtcttgcaa ggtcaagaat tattgggtta tagaactcat gatggtactg ctgttgctac 240
 ttcacagcca tgtgaagcaa gaaacttgca gtacatcgat gaacgaggtt gctctaacaa 300
 tgggagtaac aatgtcctaa ggggggtccc aagccatggt gtgaaaacac cacttggaat 360
 tccctaccat tgctctggct ttggggagtc tcagagattc caaa 404

<210> 3758
 <211> 442
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations

<223> Clone ID: LIB103-040-Q1-E1-G2

<400> 3758

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ttttgtaaag aagtacaaga ctatcattca ccctggagag gtaaaccgaa tcagggagct 120
tccacagaac agtacgatca tcgccactca tacggacagt ccagatgtgc ttatttgga 180
tggtgaggcc cagccaaata gacatgctgt cctangagct actgattctc gccctgattt 240
gattttaaga ggacatcagg aaaatgctga gtttgctctt gccatgtgtc cagcagaacc 300
atatgtgctc tcaggaggga aggacaagtc tgtggtttgg tggagcatcc aagatcacat 360
atctggactt ggagactcct canaaagtga gacttcccca gggggatcag gcatcaagca 420
tagcaaaact gcaaataaaa ag 442

<210> 3759

<211> 428

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-G3

<400> 3759

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tttctcaac accagcctct tcagctgtga actgaggcat acgtgaggaa atgactggca 180
ttgaaggaa tgcttcact tcaatttctt catcaaactg ttctgaggta gtaacagaat 240
gattttcttc atcagatccg cttgggatct ttagtcttc ttcataagga acaatttct 300
taaacgacat ggacgaaatg ggaacgacat caatacgatt ttcaatcgag ctggtcattg 360
gcttcatttt cttcgcgacc gaagaatttg ccgcagctga tgccttcctt ttcttcacag 420
cagcacct 428

<210> 3760

<211> 438

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-G4

<400> 3760

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gatctgagac catggaagat agtgccgggg aagaggctcc gtgtacaacg aagatggtgg 120
accggctcca gtgcggcgta tgaggctcatc aatgaggcag atgcactgca gtggacaagt 180
gcgccgatgt agaaggggag gagcacgaag gctgcgggtg tgtggagaag tctattttgt 240
gggtggggata gaaaatgggg agtattcagg tgtactactc tgggtgccgg gtgggggttg 300
ctgggtacga tgaacctaaa gttacgaaaa cagctcccta ccaagcatca tccataggcc 360
tgttctgaag gctatgatgg taacttccca ctgctcaa at cagggtcgcg ggagattttc 420
ccgccgacca caaaattt 438

<210> 3761

<211> 319

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-G5

<400> 3761

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taactggtac acctcaggat aacactataa tgccgtggta tgctgtatat tttggtcctg 120
atgatactcc ctgcgatggt gtgtcgttca tgctgatact tcagtttact gaagattatc 180
ctaaaaagcc acctacagtc cggtttgatt cacgaatgtt tcatcccaat atttatgcag 240
atggcaccat ctgtatagat actcctcttc accactgggt cccgatttat tatgttactg 300
ttatactgta atccattca 319

<210> 3762

<211> 452

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-040-Q1-E1-G8

<400> 3762

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cggcttccag gaagcagatc tgagaccatg gaagatagtg ccggggaaga ggctccgtgt 120

acaacgaaga tgggtggaccg gctccagtgc ggcgtatgag gtcacatcaatg aggcagatgc 180
actgcagtgg acaagtgcgc cgatgtagaa ggggaggagc acgaaggctg cgggtggtgtg 240
gagaagtcta ttttgtggtg gggatagaaa atggggagta ttcaggtgta ctactctggg 300
tgccgggtgg ggttggctgg gtacgatgaa cctaaagtta cgaaaacagc tccctaccaa 360
gcatcatcca taggcctgtt ctgaaggcta tgatggtaac ttcccactgc tcaaatacagg 420
gtcgcgggag attttccgc cgaccacaaa at 452

<210> 3763
<211> 390
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-040-Q1-E1-G9
<400> 3763

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ctaattgaga ggcaccccaa tttcatttgt aatttcatgt cattattttc tgtctagtaa 120
tcacttttgc aactacccta tgtttacacg tgtctttaca tcttacttac tgtttgtgcc 180
atgtcaacac tacacgataa cctatcatca tagtctgatt taattctgca gacatacaga 240
tactttgcac tcacacaatt acttctgtta aatccacac atgtgagggt gccttgattc 300
tttttacttc caatccatag actcattttc cacaacttcc cacattgtta ggatttgtac 360
agatccataa atttacctca gttacagatt 390

<210> 3764
<211> 439
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-H1
<400> 3764

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tggggagggtc agaccagaag ctgcagataa tgaaggggag atcaagccag aagctacggt 120
ggatgaagga gatgggactg gtctgattgt anggatgtgc acagatgtac agaaaggcta 180
cttccgtctc acggggcctc cagatgcaac aaagataaga ccaaagcctg tacttgtaga 240

agccctgaag tttgtccagg tctcaagtaa agactataat tttaaaacag atcaactgaa 300
atcaattcgt caagatatga ctatccagaa catagaggat gaactttctg tgcangttta 360
tgagtatcat gcaagacttg cgttgtgcaa tcgagatatg gctgaactta acttgtgcct 420
cacgaaactg cactgcctc 439

<210> 3765
<211> 424
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-H10
<400> 3765

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tcaagtctac ggtacaagga aagaggcata acactaacac cggctcctaa agcacataaa 120
gcagttttta cataattcct ttttatggag catgggatgg tgggtactcc gggatcacca 180
agtttcttag gtattccatc cttaaaggta tagtttagcga gcatggtgga gatttcagct 240
tcatgtattt tccttttatt agtgatgata tctttcatat atttagcata agggtttgtt 300
ttaagcatat cagttaagcg catgcgtaag aaaatacgtc taatcatttc agcaaaacgc 360
tcaaagtcct catcatcctt tgtcatggat gggtttacgan gaaaaagcat gggtttctca 420
accc 424

<210> 3766
<211> 401
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-040-Q1-E1-H2
<400> 3766

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attaatctat gataaattta ctacactggg aattttcttt aataattttt gcagctaagt 120
aagtatggat gttgctgcaa tctttacata ctgtcgtggt tatgcagaat gctgttaggt 180
ttgcattggt tgcatatggt tgcttcgtaa gtgattctag ttgaggatat gactattaat 240

caagcatatg catttaatat gcaatgttga ctaataattt tactgatttg ctataactaga 300
gtatgataat gttttggcaa tggtttatac taacttatct cacgagtcct tgttgacttt 360
tgtgtgcatg aaccttttga gatttaggga gaccttgata t 401

<210> 3767
<211> 270
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-040-Q1-E1-H4
<400> 3767

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taccttcagg cacacacctc cccggaactg gggcccgaaa cttcttgatg tctactacac 120
aaccttcttc ctgtgcacgt tgttggcct ccaagtgtag aagtttgtcc gacagtatca 180
ccattcgcgc aactggcaga cccaaggttt gtaaaccgt cgcaggtgaa tcatgaagac 240
gggctctctc aaacaagcat gcaaccaa 270

<210> 3768
<211> 174
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-040-Q1-E1-H5
<400> 3768

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tgatcaatac actgtgggaa gatgtcaaga ctaagcttgg agatgctgct tcctctggta 120
acgatatgat agattctaca atgaagcatg ctttgcgttc gaatgattat agct 174

<210> 3769
<211> 451
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-H6
<400> 3769

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gcgaagcagc ggggcaggaa gaagggcagc aaggcgaaga agagcgtgga gacgtacaag 120
atctacatct tcaaggtgtt gaagcaggtg caccgcgacg tgggcatctc ctccaaggcc 180
atgtccatca tgaactcctt catcaacgac atcttcgaga agctcgccgg ggagtcggcc 240
aagctggccc gctacaacaa gaagcccacc atcaogtccc gggagatcca gacctccgtc 300
cgctcgtcc tccccgggga gctcgccaag cacgcogtct ccgagggcac caaggccgtc 360
accaagttca cctcctcnca gacaacttag gcttgatcct cgtcgcttca tgcgttctgt 420
aagtacgtag ttggcagtat gatgttaca t 451

<210> 3770
<211> 213
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-040-Q1-E1-H8

<400> 3770
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cgatggctgc agacatcgga agtccggcag ttccctcgct ctgggtctct caacagggca 120
cgcggtcggg tgcgataggt cgggataact cgtgtgcttc gatgtccttc gtaaactgac 180
catatcttgt tcaactcogtg ggtatatctg cgt 213

<210> 3771
<211> 449
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-040-Q1-E1-H9

<400> 3771
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aacaatttct ataaaataaa gccaccacct tgctcaaaaa agatataagt gaagcactag 120
agcaaattgc ctagctcaaa aggtataagt gaagcacata gagtattcta ataaattcac 180
gattcatgtg tgtccccctc aaaagatgtg taaagcaagg atgattgtgg aaatctaaaa 240
agcaaagact catatcatatc aagacgctcc aagcaaaaca catatcatgt ggtgaataaa 300

aatacagcct caagtaaatt taccgatgga acgaagacga aagaggggat gccatccggg 360
 gcatccccaa gcttagatac ttggttggtcc ttgaatatta ccttggggtg ccttgggaat 420
 cccaagctt aagctcttgc cactcctta 449

<210> 3772
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-A3
 <400> 3772

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 tggcggagga gaatgcccc a gttgaggttg ccgctcoggt tgcggcccct accccagttc 180
 ttggagagcc catggacttg atgactgctc tgcagcttgt gatgaagaag tcaagcgctc 240
 atgacggcct tgtcaaggga cttcgtgaag ctgcgaaagc gattgagaag catgctgctc 300
 agatctgtgt gcttgtctgag gactgcgacc agcctgatta cgtgaagctg gtgaaggcac 360
 tgtgtgctga gcacaacgtt cacttggtca ctgtgcctag tgccaaaact 410

<210> 3773
 <211> 381
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-B10
 <400> 3773

tgacgggagg ggacatgaca cgtatgtatc gttgctatta aggataacaa gatgggggtct 60
 atttctacat gaatagatct tgtctacatc atgtcattgt tcttattgca ttactctgtt 120
 tctccatgaa cttaatacac tagatgcatg ttgtatagcg gtcgatgtgt ggagtaatag 180
 tagtagatgc cggcaggagt tgttctacta atcttggacg tgatgcctat ataatgatca 240
 ttgcctggat atcatcataa ttattttaag ttctatcaat tgcccaacag taatttgttt 300
 acccgctgta tgctattttt ctctagagaa gccactagtg aaatctactg cccccgggtc 360
 tcttccttaa catatttgcc t 381

<210> 3774
 <211> 406
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-041-Q1-E1-B3

 <400> 3774

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cgggtcgacc ggataaagga aaggataagc aaaggaaagg caaaaggatt tcgtgaggat   60
gaccacgata ccttatggtt tgaggatcgc gtatatctgc ctaatgaccc cgagatcagg  120
aagttgattc tgcaggaggc ccatgattca ccgtattcga ttcaccccgg aaacactaag  180
atgtatctgg atttgaagga aagtttctgg tggacaggaa tgaagaagga tattgccgag  240
tatgtagcag tatgtgatgt atgtcagaga gtgaaggcag agcatcagaa gccagtggga  300
ttgctacagc cattgccgat acccgaatgg aagtgggaca agcttggcat ggactttatc  360
acgggattgc ccaagactcg tttaggctat gactctatct gggttg                    406
  
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<210> 3775
 <211> 422
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-041-Q1-E1-B4

 <400> 3775

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gggtcgacgg gtcacggta actttacttg gagctatatt tttatttacc acatgatatg   60
tgttttgctt ggagcgtaa tttattttgt taggatttgc ttgctgttat ttagaacaat  120
gtttttcatc tttatttca ataaaagtgg cattgatagc ctctactatg cctatgttac  180
aagtatacat gttgctgttt gaacacagaa agtttaccgc tgttgcaata attccctaga  240
aaagtcagaa tgtgataaaa tgttgaaacc ttttgcata taagatatga taaatttaat  300
acagtggaaa ttttctttca taatttttgg atctagggaa gtatggatgt tgcagcattc  360
tttacagact atcctgttta agcagattgc tgttatgttt gaattgtttg catatgtttg  420
ct                                                                    422
  
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<210> 3776
 <211> 406
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-E1

<400> 3776

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gcattgacag cctgaagaac tacctacaag tcaaggcggg cgtcaccgcg cttagaacc 120
ccgcatggtt gtgagcatag cgcagctatg gtcctccgtg atactccgga gaacgtgaag 180
actcgcgaca attgactgcg aataggaaga tgatgatgat gacaccagcg atgatcacta 240
ataagccctt gccttcattg gcagccactc accgtctcta gtagatagca gatgtgattt 300
tcctttgtca atcgtggaaa gacatatatg ttgtagcacc attatgttta ttatcgctg 360
ttggagaagt ctctgggtgc agtaaatcag tcactttgtt tcagtt 406

<210> 3777

<211> 322

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-F1

<400> 3777

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ttgtcgagag cctttacatg aggtcagcaa agatcatggc ctgaggagat gttttgttct 120
taccgcggtt ctccagttaa atcttacct tgagctctgc tagtgtctcg aggacatgaa 180
atctctgctt gttgccattg tttcttctt gcaaattgtc ttctgttagc tctataaaat 240
ttctagcctc gtggacaaga agataccgtt gtttctgctg gatggaaata cagttagcac 300
ttgctgatat caaccatttc cg 322

<210> 3778

<211> 390

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-F2

<400> 3778

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cagatcatct atcagacaaa tgcaggggcc gtgatgctta cagactgcgt cttctgggtc 120
atcattttcc cattcctcac cataaaagat tacagcatga attttctatt gataggaatg 180
cactcgggtca acgctgtttt cttgctcggc gaagcatctc taaatagcct gcgcttcccg 240
tggttccgga tcacgtattt cttcctttat accgcgctat acgtagtctt ccagtggatt 300
gttcatgcat ctactccaac ctgggtggccc tacgcgttcc tcgacctctc ctctaattctc 360
gcgcctctgt ggtacgttgc cgtcccgttc 390

<210> 3779
<211> 426
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-F3

<400> 3779

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tctgatctgc atagcgtag gcaccggtaa agaaggagga attttttgca cagaaacaaa 120
gcaaactgac ctctctctct tectgatctg gaactgtaca tagtataaag aagaacagcc 180
tgtaggggga gggtagttag tgccatttat atattattaa caaaaaagaa agtaaagcaa 240
ggctgctgta tccaaaagga gaaggaagga ggcagggtaa agagtgggt taaatttcag 300
atatacta atacatgtac acagtatagt ttaggtagt tacgtatgaa atgctagcta 360
aagcatattt acaagggccg gatgctgcc tctgaatgt aaatcttccg ggcattcatt 420
caggtg 426

<210> 3780
<211> 431
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-F4

<400> 3780

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atgactgaaa tacaagtttt tctagaatca tacatgtgag tgacagagaa ggaacacccat 240
 cttagctttt agattttaac aaattgtgga acctaataatgat gaattgcaa acatgatttt 300
 gaattttaac aaattcttta cttccgaatt aaatgaacct aataatgatg tgctagacaa 360
 agtacatgtc agtctaacta tgggtatgaa tgaaatatc ttcacgccat atatacttga 420
 agaactaaaa a 431

<210> 3781
 <211> 437
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-G2
 <400> 3781

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 ccatgtgcta cagcctccat gtccatgtcc tccctttctt caggttctac aggggagccc 180
 agggcagggt cagcagcttc agctgcacaa atgcaacccat caagaagttc aaggacgccc 240
 tcgcaaagca ctgcgccgac aggtgcagcc tcggcccggc gcggggggctc gaggaggcgg 300
 atctcttggc tctggcggca aacagggacc tgggaattcac ctacaacgag aagccgacgc 360
 tgggtgccc atcgccgaggct atccagatgg aatctgcctc cattggggggc ccatggatgc 420
 cattgccccg cgccgct 437

<210> 3782
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-041-Q1-E1-G3
 <400> 3782

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 tgacattaat gcctaagaag tgatgaagag ctccaagatc ggtcatggag aattctgacc 180
 gaagagagggt tataagagag ttaggaaggc agtggaggag caggttagga tgatgtcatc 240

gacatataag aggaggttaag cgggtggcggtt gtcagagtga taagtaaaca tggaagagtc 300
agactttgaa gagaggaagc caaggggtctg aatgtatgtg gcaaaccttg ttggaaatat 360
gccctagagg caataataaa tggttattat tagatttctt tgttcatggt aattgtcgag 420
tagtcatg 428

<210> 3783
<211> 422
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-041-Q1-E1-H2
<400> 3783

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ggccacctcc cggaagctcc tgctcgacga catcctcgag cacgtaggag gagccagcct 120
ccgcaccgcc cgcccatgat ttggcgaagc cgtggccacc gaagatgggtg acggcgacgg 180
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cgtggatcgt ggaggtgctg gggccgcaga cgccgttcat cgagtagccg cacgggtcga 360
agtcgaagtc gcagatctcc atctccggga tgatagcaga gatccccgaa acttggtcat 420
ct 422

<210> 3784
<211> 352
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-041-Q1-E1-H3
<400> 3784

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taaaatgtat tggtttcgat ttcattggtgt atgtaatcct tcatacttca gtttgctcgc 120
gaggcaacgt aacgatttcc actagaaaga ttttgtgcag aatgtttcgc tgggtgtaatg 180
tcacttgaga tgccaaaaaa aaaaaaaaaa aaaaaacaaa aaaacaaata aaaaaaaaaa 240
aaaagaagaa aaaaaaaaaa taaacaaaaa ataaacacaa taaaaaaaat ccccttaaa 300

acaacctgaa ataaaaataa acaaagaaca aaaaagaggg cccccccaaa ga

352

<210> 3785

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-041-Q1-E1-H4

<400> 3785

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atacttgtgt taaagtttgt gattcccgta gcatgcacgt atggtgaacc gttatgtgat 120
gaagtcggag catgatttat ttattgattg tcttccttat gagtggcggg cggggactag 180
cgatgggtctt ttcctaccaa tctatcccc taggagcatg cgcatagtac ctcgtttcga 240
taactaatag acttttgcaa taagtatctg agttctttat gacgaatgtt gagtccatgg 300
attatacgca ctctcagcct tccaccattg ctagecctctc taataccgcg cacctttcgc 360
tgggatcata caccacccat atagcttcct caaaacagcc accataccta cctattatgg 420
catttccata gccat 435

<210> 3786

<211> 373

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-042-Q1-E1-A1

<400> 3786

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attgccgttt caccacgacg actgctcaat tgtcttatga agttgggtctg aactgtacct 120
cgtcgatgta gatcagtatt tggagtttgc gtcatttgag tgtgttgcg cggatgtaat 180
tcaaggcaca gtggatcagt atgtggagtt tgactcattt gagtgtattg cgtctgatgt 240
aattcatggc atagtgtgat ggaagactcg tgatcacact gacatgacat ggctttgttg 300
tctgatacaa tttgatttta tatatcaaaa tgaaaacatg tatatcgtgt tttaagtatt 360
gtataacatg cat 373

<210> 3787
 <211> 286
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-042-Q1-E1-A10

 <400> 3787

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 tatgaggctg tgatgtctta gcgtctgcat ttttacacac tcgcattggt gtcttaaaga 180
 gggacttgca gattttcaca tatgattact gatgtattga gaacattcaa actttgagga 240
 atttctgcat gctgaattac agttagcagc atggatatgat tcgctg 286

<210> 3788
 <211> 374
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-B5

 <400> 3788

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 gctgcccttt aacaatatgc tatctccag tgatattatc tcagctgggt ctgcaagttc 120
 tgcgtagcact gccggtgggc gtgggcagct gtatgtgtgg ggaaagttga agaactgggg 180
 cgatgagtgc atgtatccaa agccagttag agatttaagc ggttggaaca tccgctgcat 240
 ggcttctggc gacatgcacc atattgttgg tgcagaggat tcttgcataa gttgggggtct 300
 ttctgaatat ggagagcttg gttatggccc tacacattag tcatctgtaa atcctaaaaa 360
 ggttgacatt cttg 374

<210> 3789
 <211> 427
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-B8

 <400> 3789

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 tgatgccctt catcttggtg aagaaggcca cagcggagag gtcacccttg cgggtgtgct 120
 cgagctgtga gcgagctgg atcaccctcg ccctagactg cgacgagaag ctctacagga 180
 gcgccgccca gagagtgtg acctgcatca ggacctctcg agacagagat gcgatcagaa 240
 aagtaagaac ctgctgatcc tgggtgaccc atacggcatg ctcggggttg ggcgtggagg 300
 tgggtctctt cttgccagcg acgtccttct tcgtgacgat cacagcgggg ggctcccgaa 360
 gggagccgtc gatgtagcct gtcactnctg ccgccttgat gtgcggcagg acttgtgcct 420
 tccacac 427

<210> 3790
 <211> 360
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-C10
 <400> 3790

ggtcaagata tcccggtcg actttgacga tccgactacg aacgtgcgag gacgtcgcgc 60
 cttagcaatc gctaaaccaa ctccgagagg ttattgacca cgccggagca cgatcaacct 120
 gaccacgagg gtctgtttcc tgcgagcaaa cgaagaacaa gcaagaaact gagattgcaa 180
 tctggatatt gcgaatataa gatgaaagct ttattgatca acgtggtgtt ctgtgacgcc 240
 tttgtctggt cgttgaacac aaacgaagta cgccaagtgt cagctatggc gaacttttaa 300
 tctaaacaaa accccccaaa atctaaacga tgccctaagg gctgtatata tggatgaaga 360

<210> 3791
 <211> 344
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-C11
 <400> 3791

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 aagtatatga tcgtcacaa agaaactaag tgggtgtgca tccagcttgc ttgactcacg 120
 aagacctaat gcattttgag gaagcccatc attggaatat acaaaccatg ttctagtatg 180

aatattttcca actagtatat gaaaatgata acataggaga cgcggtatca tgaagatcat 240
 ggcgctactt tgaagcacia gtgtgggaaa aggatagtag cattgtccct tctctctttt 300
 tctcccatth tttgggcctt ctcttttttt agggcctctt tttt 344

<210> 3792
 <211> 317
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-C2
 <400> 3792

tgcacgggct ctggtgttgt cgtctatgaa tctaaaagtc attgtgtggg agattcaaaa 60
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaggaa gataaaaaag 180
 gataaaaata taaaaaaaaa aaaaaaaaaa ggtaaaacct aatgaataaa ggtcaacaaa 240
 attaaaataa aaggccaaag atttaaaaaa tgataacggg aaaaacattg aagtaaccaa 300
 ctttaaaaca ctagaaa 317

<210> 3793
 <211> 370
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-C4
 <400> 3793

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 ttctatgtct cccacctgga ctgaatcccg gatggaattg aagcgtctct tgatgtgctt 120
 gggtctcttg tgaaatctgg attccttcgc caaggcaatt gcaccagtat tgtcacaaaa 180
 tattttcatt ggacccgatg cactaggtat gacacctaga tcggatatga actccttcac 240
 ccagactcct tcatttgctg ctccgaagc agctatgtat tccgcttcac acgtagatcc 300
 cgccaggaca ctttgttttag aactgcacca actgacaact ccgccgttca atgtaaacac 360
 gtatccggtt 370

<210> 3794
 <211> 275
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-C7

<400> 3794

cggcagcaag gcgaataagg gcgtggagac gtacaagatc tacatcttca aggtgctgaa 60
 gcaggtgcac ccggacatcg gcatctcttc caaggccgtg tccatcatga actccttcat 120
 caacgacatc tttgagaagc tcgccggcga gtcggccaag ctccgcgaggt acatcaagaa 180
 gccaccatc acctctaggg agatgcagac ttccgtccgc ctccgtcatcc ccggtaaagct 240
 cgccaagcac gctgtctccg agggcaccaa ggccg 275

<210> 3795
 <211> 352
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-C8

<400> 3795

acgggggtca ataatagagt aggagtattc cgtactagta ctactcctac tagtaccaag 60
 tttttactcc taatactata ttactagtag taccactata caactagtag gtacgtgcac 120
 gacataacat cgtatgaaca aaaaacggga agatcttggt ttgggtgatt tatctatctt 180
 tcaatcaacg tagtatgaat aatatgatgt ggggggcaca catgaagctt atgtggcttg 240
 gttgcatggc tacggcaggt tacagaaaat tatatagata atgtgttttag agtgtacttc 300
 actcaactcc atatttatac attggatcca ttgcagcggc ctggcacatc ta 352

<210> 3796
 <211> 348
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-C9

<400> 3796

cggttcgacg gggtcaccaa ccagcgggtcc gagaacgtca aggacgagat cgtcctcgac 60
 ggcaacgaca tcgagctcgt ctcccgtcc gccgcctca tcaaccagaa atgccatgtc 120

aagaacaagg atatcaggaa gttcttggac ggcacatctacg tcagcgacaa gggcgccatc 180
aaggaggagt agagagccgg aaaccgtccc gccaccaga agccgtgttt ctgcctgccg 240
tgtttgtttc atcgtgtttg tgtctgtctg tcgtcgtcgt cttcgtgatt ttgaactttc 300
tctagactga attttgtagc ggagttaa at ttttagggat gtgccgtc 348

<210> 3797
<211> 153
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-042-Q1-E1-D9
<400> 3797

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tggaactgagc agtccatgac ttatagcagg accgcgtcat agccatacat acgtgtacca 120
agagagatct agatgtacaa gtgcgtccag gtg 153

<210> 3798
<211> 292
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-042-Q1-E1-E10
<400> 3798

cccgaccgga gaagaatata tgaggcatcc tttttaacgc aacttgtag tttggtacag 60
attcgtgaga cactgtgagt tgggtcacgg gatagagata catgattttc atttctcatt 120
ggacagatac tatgtgagac gtgcgagctt gagatactac ggtcatgaga gagttatata 180
tgagtttttt tgttgatttt cttctcacag agtctatcta catcgtcaaa ttaccgcctc 240
atcagattaa ctgcccgtat aatccagtta acatggtaat ttctatggac tc 292

<210> 3799
<211> 291
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-042-Q1-E1-E12
<400> 3799

gggacttgac gacatggatg ttgcaagtct caagaagatg aacaagaaca agcagcttgt 60
 taaaaagcta gccataagt accatgcttt cctggcatca gagggcataa tcaagcaaatt 120
 cccacgtctc cttggggcgt gacctaacaa tggagggaac tttctcactc aagatatgcc 180
 acgtcaagtc cttcaaaaga aggtaccacc ccatcatacc acatcataaa catagctaga 240
 gcatgttcct tgcaaggggtg tagcagtagg ccacatgtct aagcgagcat a 291

<210> 3800
 <211> 441
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-E3

<400> 3800

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 tccaaggagg ccggcggcga ggccaagcag cggggcagga agaagggcag caaggcgaag 120
 aagagcgtgg agacgtacaa gatctacatc ttcaaggtgt tgaagcaggt gcacccggac 180
 gtgggcatct cctccaaggc catgtccatc atgaactcct tcatcaacga catcttcgag 240
 aagctcgccg gggagtcggc caagctggcc cgctacaaca agaagcccac catcacgtcc 300
 cgggagatcc agacctcgt ccgcctcgtc ctccccgggg agctcgccaa gcacgccgtc 360
 tccgagggca ccaaggcgt caccaagttc acctcctcct agacaactta ggcttgatcc 420
 tcgtcgcttc atgcgttctg t 441

<210> 3801
 <211> 400
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-F10

<400> 3801

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 agcaciaaaga gggcggaagc ggtagcgctc ctgccccggc gacagctgcg acgggtggtga 120
 cgagttcggc cccgacaggc agcaccttcc ttgctgttca gtacgcgccc gtgccgaaag 180

aaaaccaggc accagcttcc tcttcggttc atgagcacca gcagtccttg gcaacatcct 240
 ataccatttg ttgatttggt tctgtaatag caacctcagt ggtcaaaaga caaaaagaaa 300
 accaaaccga aataagtggc tcccctctgt gatttcatga ctagactgga aaacatggga 360
 ggtgctagag caatagaaat cccaaacagc aagtcttttt 400

<210> 3802
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-F4
 <400> 3802

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 ttgattgatg gatatgagag tgggtgcaaga ccgggacaga ggaaccatag gaatgttatg 120
 tcaggttcct tgctcacttc tcaagcccaa tatcattcct ccaactcgga ctttcatgct 180
 agaattaaga acccccctaa acaatgacag cgtaccgagc gggccctacg tctatcgggg 240
 agctcaaadc ctactagag tgaggcacgt ctgatcaat acatctcgaa tctaaagata 300
 gaatgttatt gttatgctgt cgccactctg gagtatgatt gaccatatca tccagcgagt 360
 ggtcttaagc gctcagtgc tccatactga actcgaatgt gcg 403

<210> 3803
 <211> 282
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-G10
 <400> 3803

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 gtccctcggcg atggcttcta gcttggcccc atacatgtct tcaaggttat gattggcgctc 120
 gagacgtaca tgatgtgcat cttcatggtg ctgaatcagg tgcattcctga catcggcatc 180
 tcccctacgg acatgtccat catgaagtcc ttcattcaacc acatcttcaa caagctcgcc 240
 ggggagtcgg ctaagctggg ccgcttgaat ccgatcccca tt 282

<210> 3804

<211> 329
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-042-Q1-E1-G12

 <400> 3804

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 ctagatcttc aagggtgcaga agcaggtgca ccccgacatc ggtatctcct ccaaggccat 120
 gtccatcatg aattccttca tcaacgagat cttcgacaag ctgcgcggcg aggccgcaa 180
 gctggcgcg tagaacaaga agccaacat catgtcccgg gacatccaga cctccgtccg 240
 ccacgtcttc cccggcgagc tcgccaagca cgccgtctcc aacggcacca aggccgtcaa 300
 caagttcacc tcctcctaga gtgctcctg 329

<210> 3805
 <211> 331
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-042-Q1-E1-G5

 <400> 3805

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 tcatgactgt gctttggaga tggagatcac aggcacaagt tgatgatgac catatcatgt 120
 cagatatttt gattgcatgt gatgtttatc ttttatgcat attattttgc ttagtacggc 180
 gatagcatta taagatgatc cctaactaaa tttcaatgta caagtgttct ccctaaggta 240
 tcaccagtac tagagttcgt cgtgttgaga cagcacgtga tcatcgggtg tgataagctc 300
 tacgtcgaca gacaatgggt gtaagctagt t 331

<210> 3806
 <211> 446
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-042-Q1-E1-G6

 <400> 3806

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ctttaaagac ttaatccgat aagataactt caaaggggaa actcaatcca ttacaagaga 120
 gtagaggggg aggagaaaca taagatccaa ctataatagc aaagctcgcg atacatcaag 180
 atcgtgccaa atcaagaaca tgagagagag agagagagat caaacacata gctactggta 240
 cataccctca gccccgaggg agaactactc actcctcatc atggagagca cgggatgat 300
 gaagatggcc accggagagg gattgcccc tccggcaggg tgccggaacg ggtctagatg 360
 ggctttcggg ggctacgatg cttctggcgg ctgaaccccc gatctattgt gttccccgat 420
 gtttttacgg tagatggaga tatata 446

<210> 3807
 <211> 440
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-G8
 <400> 3807

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 ttgccttcgc ctatagcaga aagttcatcc ttggcactat gcttggataa agcaacagga 120
 ttgccagggg cagtgtggcc aaagccagta atcatgatgt catcttcctt gtcaccagca 180
 gccttcactg gagttggcgg tttatcaata gccttagctg gacttgccgg tttatcagtg 240
 tctcggactg ggcttgttgt ttttccggac tggcctgatg gagcaacttc tacttgttca 300
 acaacgaagt cataatcttg tgggtggcaga tcataagca gagcgtcagt atttgtttct 360
 actggatctg gagtcttctc cggtttaatg actacattat cgtccgccgg tttatttaat 420
 caggccttct tgctgggtct 440

<210> 3808
 <211> 308
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-G9
 <400> 3808

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 aacttcaacc ggtttggatg gctgtcatgt aataggatag gtgtcaagtt tcctagcggg 120

tgttttgcct gccggttggtg gttgtcctac atttgctttc ttgctccttg tgagcattat 180
 tgcctgtcgt ctgaaagctt gacacttatg taggagcatt ggtcttgtcc ataaaaatcga 240
 cctatccatg agtccgattt ataggacgtt gcatcgtggg ctattaaact tttggcatct 300
 ttatatca 308

<210> 3809
 <211> 326
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-H10
 <400> 3809

aagaggaata agacagcgaa atcggctgtg caattatttg gtggcttgac attagtttcc 60
 tttgcatgtt cgttcccttg tttaagtta cccgggtggg tgtgtgtgtc cttgcgagac 120
 tatttcggct cacggtcagg tctctgcgat ttggaagctt ctcattgggt ccatgggtgtt 180
 ggatgatgtg gatggaggag ggttcgtgtt agctatctta gtcgaactccc tctggtcgag 240
 ttttgtaggt taactaggac taggtctact actattcaga tggcctttta ctcgggttcac 300
 gcaacttatc cactccactc aagccg 326

<210> 3810
 <211> 375
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-042-Q1-E1-H11
 <400> 3810

ccgggtcgac gggctgtatg cccaggccga caagtgcgca catgctgaag aggggaggag 60
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 gagaaaccgg cggcgcaaca acaggaagaa gaaaggcaaa gacgtgctag tcgttgaaca 180
 gtccgtcaat ggagccagcg ccaaggaagc caaagttggt agctctagca aggaggttgc 240
 cgcggccgcc gacaagcagg gcggcaacga caagcagtac tgcaagatcc accgcaccaa 300
 gggccatgat ctccagagtt gcaagaatgt tgagcagctt gttgagctgc agaaggccgg 360
 atacgagcga cgcga 375

<210> 3811
 <211> 360
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-042-Q1-E1-H12

 <400> 3811

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 tgggtcaaagc cgtggatccg tgcacggtgc gaccttgga actaaagcga ccaactatgag 120
 catcaagacg atgagtactc cggcgcaatc cgcgaaaggg cggctgcngc tgccaaaaca 180
 gcagctgctg cagctcagag tccattcacg ccaaaagtac gcgtaacctc ttgtaaacat 240
 tttccagatt tagttgattt caatcatctt tagtacttgc aactaaattt taccaagtaa 300
 catttgtcaa acccatctga aaaaaaaaaa aaaaaaaaaa aaaaaaaaag cggccgctct 360

<210> 3812
 <211> 411
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-042-Q1-E1-H2

 <400> 3812

ccgggtcgac ttccaccaa gagatatcca tcatctcatc gagagacggg acagctttgc 60
 ctctatcagg tggtagcaga tttccagggt gtcggtgag attttacagt ttgtcgtact 120
 ttagatcgaa tctgttctgc atacgaagag acgacgacaa agccaaaaaa attagggtta 180
 gttcatccca tccgaaccaa tctgagcctt gcataatctt ttctgtagtt gctttgttga 240
 acttgcggtt gcatcgctcg gttcagttgc tggtcgtagc gtcaagtctt ttagagtttc 300
 gagttctgtt cacaagttgt caagccgtcg ccgcaccatc atcatcgccc ctgccatcta 360
 tcaccaccgc tcagaatccg tatctagata ctaccaccaa tccgtgtcca t 411

<210> 3813
 <211> 430
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-042-Q1-E1-H4

<400> 3813

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tcatcttgtc tgctgttgca actgcgcgaa aagggtggaa ctcatggatg aaccattgtg 120
ccctgtgtgt angcaagaca tccaatacat gctcagggtt tacgactctt aaggctcctt 180
gctgatgtgg cccaagcacc ggcagagttg cgactccaac ggcccatcct cctgtcctgg 240
gtgctctccg ttttttgttc ctagcttacg ttactgctac cctgaaagta tgtgaatata 300
tgactgcgct atctaaccct cagaaactag gttaccagta cttgctagtt cagcctgtga 360
atatggatta tgtatgatct tagatgaccc cgtgaacttg ccaagttttt tgttggtgtt 420
gcatggatac 430

<210> 3814
<211> 343
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-042-Q1-E1-H9

<400> 3814

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tgagtaatgt atggtacatc aagatacatt caccagatga tgtgcacaag ttgggcaagc 120
aaggaaatga tccacgttac ctttccgaaa tgcaaaatca ttgtgctgtc tctgggtcca 180
tcgacgattc gacagcacat ggtaccaccc ttgctcaccg cggcacaaca tccccggaac 240
caccgatcgt ctcaacttcg tacctgtctc ctgctgtgtc tccgtgcacg tcccgagaga 300
tccccacccg ttacgtatca ccgtcctgat caagttcacg aca 343

<210> 3815
<211> 415
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-043-Q1-E1-A1

<400> 3815

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gtacaagatc tacatcttca aggtgctcaa gcagggtgcac ccggacatcg gcatctcctc 180
caaggccatg tccatcatga actccttcat caacgacatc ttcgagaagc tcgccgggga 240
gtccgccaag ctgcgccgct acaacaagaa gccaccatc acgtcccggg agatccagac 300
ctccgtccgc cccgtcctcc ccggcgagct cgccaagcac gccgtctctg agggcaccaa 360
ggccgtcacc aagttcaact catcctangc tagtctgccg tgtccgtgaa ctgat 415

<210> 3816
<211> 137
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-043-Q1-E1-A2
<400> 3816

tgttgcaatg tattgctttg acgcctcgtg tcttgatg ggcgtgcttg tagtaagaac 60
tgccaagtgt tatggtagtc ctttccgggt gaattgttat tccctgtcga ggacgaaacg 120
gagaattggt tgcccc 137

<210> 3817
<211> 386
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-043-Q1-E1-A3
<400> 3817

gccttcgggt taacccccaa cggcccggcc ggccagggtg gaggaattcg ccaaccgga 60
aacggaggaa ggcggaatt caaaattctc ggcgctcttc tacaacttgt cgcagcaggt 120
caaggacagc ctccagagca tgctgaagat gacgggagc atcgagcagt gcagtgcga 180
gatcgangtg gagatcgagc aggccaagga gggcgtggct gacaagtaca ggggtgctcga 240
ggaggagaag gaaagggtcc agaagggtgg cctcggcgcg ctcaacatcc tgagcgggtg 300
catctgaagc ctgcaccacc ttaataccaa caaagacaat cctgataact gccccgtct 360
gtagatcacc gttcatgtgc aagcct 386

<210> 3818
 <211> 419
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-A4

 <400> 3818

cgggtcgacc ggtcctcaca aacgcgacgt taccggaacc aaccgaaga agcagacacc 60
 ggaaagaagc acacaacata gtaacaacc aacacatgaa catggtatga tatgcgggat 120
 gcggtatgcg atgcatatgc atgatttgca aaggaatgat tgaacctggc ctcagcttgg 180
 aaatccaaga gtgccactgg taagggtgagg tgatttcggt tgaaatcgat ataaagaaca 240
 ctggaatcgg atgcacggtt tggaaaaggc aagcaaaaca aatatggcac cggctcgca 300
 taatcagcaa gtagccatct aaatgcatca agataattat gctacaacac tcaaacaatga 360
 caacaaaata catggcaggg attcactcat gatgcttgac acaagatgaa cactgagct 419

<210> 3819
 <211> 345
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-A5

 <400> 3819

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 gcaacggcat gaaggccgcy aatggagtgg ctacagtgt cctactaaga tgtgtcgcgt 120
 gatgtcgaag gtacactcca gcgtatgcat cacatgaagg gccatatcga tcagtgcagt 180
 gatcatatcg aagtgccttat agaacatgcc aaggaagtcc tggatgataa gtcgatggta 240
 ctcgaggacg acaatgaaat gttccaaaat gtagacctcg ctgtgtcaa taccctgagc 300
 ggtggtatct gaagcctgca tcaacttagg cacaagagag atcat 345

<210> 3820
 <211> 421
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-A6

<400> 3820

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ccatggattc aaattcaagt gattggtaaa agagcggaat ctctttcaac ggatgacttg 120
gaacataaaa agattaactt attattgggc gaaccatttt attgtggcag tgaagggatg 180
cttccatggc aaaacctgcg tttctggaat gcaagaactc tgtttgattc aatgctatct 240
gaggatgcac tcataatgcc ttgcaaagga gtattaaagt tatgtgccat gtctcttccg 300
gacttggtga agagtcgtcg cagccttaaa gatgtcgagg gtttcgacca cttgggtgtt 360
aacgagactt taagagcctg cggatgatctt cctggagagc agcaaggtec ttgtctgccc 420
t 421

<210> 3821

<211> 400

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-B1

<400> 3821

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ggccctgaca gaacggccac actcgagacc atactgaatc ttctccaggt acgcactact 180
ctatctatct tgtttagcta ggctcatttc tgacgttgag ggcacataac atatgcatgc 240
acgtacgcac gcaggagaca gcattgaacc acgtgtggat gtcgggcctg cttggcgacg 300
gcttcggcgc gacgcacggc atgatcaaga gcaacctcat ctgggtcgtg tccaggatgc 360
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<210> 3822

<211> 449

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-043-Q1-E1-C1

<400> 3822

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 tgccttaatc tacctttggg ccttgggcct tcgagtctct gtagtaaact gctttattcc 180
 ttgtcttcat gggcttttaa gtataaacia tccattatgg ggataaccgg gcttccttgg 240
 ccggtttaca cctagtagta atatcccaa cagggtcctc gggcatccgg cctatgtgac 300
 gtgggccgga ctgatgggct atgaagacac aagacagaag actctctccc gtgtccggat 360
 aggactctcc tttgcgtgga tggcaagctt agcgtccaga tatgaagatt cctttctctg 420
 taaccgactt tgtacaancc taatcccct 449

<210> 3823
 <211> 414
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-C12
 <400> 3823

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 atgaggagag cgaagaacia aagtaggaag agcggattag caaccctgac ccaccttcta 120
 atgagagtaa cctccaact catacattat ttaattcccc ttcgtgctta ccgaaggatg 180
 attgctatga tgattgctat gatcccttga atttgtttga aatatccctt tttgatgatg 240
 cttgctatgc ttctggccaa gatgccaata tgaattatgc ttatggagat gaacttgcta 300
 tagttcctta tgtaaacaat gaaattgttg ctattgcacc catgcatgat agtcctattg 360
 tctttttgaa ttctccctac tacactatat cggagaagtt tgtgcttatt aagg 414

<210> 3824
 <211> 330
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-C2
 <400> 3824

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tacgggaagg tgctcacaca gacatacaga gactatatgt atgatatgta ctccctggca 180
 ttggaaactg atgtaatatg atgcttgtgg cctacctgag gtttgaatgt ttgagcagaa 240
 ctatgctact acatacaatt ttgttccagc ctgcctgacg atatgtatcg agcttgcgat 300
 tttcttggac aaaaaaatg taaagaaaag 330

<210> 3825
 <211> 111
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-C4
 <400> 3825

caatttaggc aattaaccaa agctagttaa acgccttgta tccagccaag gacaaaggaa 60
 aatgcaacgg gaataaaaaa aacaaccagt atcaaaaaaa aaaaacgggc g 111

<210> 3826
 <211> 229
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-C9
 <400> 3826

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 ggacaagggc gtcaaccctt cctatttcaa ggacaccgtc tcgcaggctt tctttgacct 180
 gcaaaatggc atccaggagc tcaggagcga cctcagggac ctgtacatc 229

<210> 3827
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-043-Q1-E1-D11
 <400> 3827

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 cttggccgaa gcccctgtt ccgttccggc aatctgattc tgaaactgcg acgtatactc 120

aagcgaattc ggttggtccg atgtgcagat tgcgcagttc gctgagcggg atccggacgt 180
gctgttcctg caagtcaact acgagaagca caagtccatg tgctacagcc tccatgtcca 240
tgtcctccct ttcttcaggt tctacagggg agcccagggc agggtcagca gcttcagctg 300
cacaaatgca accgtaagcc tctactgatta tggtttcttct tttgtccact acaaaaaatat 360
gttcttcaga cacgtttaag atgaatgctg acatgcttgc tgcaattcgt tctgattaca 420
ga 422

<210> 3828
<211> 331
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D2

<400> 3828

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cgcgtctgga acgtcaccaa gcgcgccatc ggcgctcgaga tcaacacgca ggtcggcaac 120
aggatcatca cgaagaggat ccatgtgcgt gtggagcacg tgcagccatc cacgtgcgaa 180
ccagggtttc tccacaagga actccacaat tgcaaaccga aagggggggg caaagcgcct 240
tgcaaggcc tcagcaccaa aaagcagccc acaagggccc aacctggggg caagggggag 300
ggcgacacca tccagacagg gacccccatc g 331

<210> 3829
<211> 416
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D3

<400> 3829

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tcccttttag aagaaggcct tctttcttgc ctgagcttgg taacgaaact tcattagtgg 180
ttagcttctt tcttcaacag tgggtctaata tggggaagct catattcctc aagatttaag 240
gccaaagga aatctggcaa tggaggcggc ggtgtgatga tccggctgac tccggtattt 300

gatgttcttt cttgggtgtt aaggctcctgg ttattctgga gcttgcttaa tgtctcttgt 360
 gggatcatgt ccaagagatg tttggttgtt ccgaaaggag ttgagatcct tgatgt 416

<210> 3830
 <211> 272
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D6

<400> 3830

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 gattatcgcg ttgaagatcc atgttcgtct cgatcacctt catccatcca ggtgcatcga 180
 agactttttc cctcaagacc ccactttccg tggctgacgc gttgtgacct tcgacagtca 240
 cctgggtctct atactattcc gtcataaaaa gt 272

<210> 3831
 <211> 410
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D7

<400> 3831

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 tgcgcgtgga ctggcggagt actacaacaa gtttatcatc acgtcaagag aaaaggaagg 180
 agtgcctcac gtteggatca gctaccatat ccgaattcta ctaaagtgtg gtacaagtcc 240
 aacacaacaa atacagatcg gatagctgcc taattatgtg atggtgcatg ctgccaaagc 300
 aaccccgtgt actgatcgaa cacatacctc tagcaacagt acttgcattg tttccacagc 360
 acagcgggag accaaaagta ctgcttggct aataagtgtg tcaaagaaac 410

<210> 3832
 <211> 443
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-D8

<400> 3832

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gtgacatgta tgaaaaataa tgcacggtag ctttgcaca aatacgaatg caactacatg 120
atcatgcaat ggcaatatga cagtaattta tgtcatgatg atgatgatgg aagttgcatg 180
gcaatatatc tcggaatggc tatggaaatg ccatgatagg taggtatggt ggctgttttg 240
aggaagatat aaggaggttt atgtgtgata gagcatatcg tatcacgggg tttggatgca 300
ccggcgaagt ttgcaccaac tctcaagggt agaaagggca atgcacggta ccgaagaggc 360
tagcaaaggt ggaaagggtga gagtgcgtat aatccatgga ctcaacatta gtcaaaagaa 420
ctcatatact tattgcaaaa att 443

<210> 3833

<211> 354

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-E10

<400> 3833

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aagaggaaga ggaagaagac gaagaagaag aagaagaaga agaagaagac gaagacgaag 180
aagacgaaga cgcagaacga cgaagaagaa gaagaagaag aacacgcaga agacgaagaa 240
gacgaagaag aagcacaaga agaacaacaa tcacatgacg aaaagtccag gaacaagaag 300
acgacgacga cgacgaagaa gacgaacaag aacacgatga cgaagaggaa gaag 354

<210> 3834

<211> 202

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-E11

<400> 3834

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agaaaagtta tgtttagccaa ccacccctcac tgggagtaac tacagcaagc caaattggac 120
atcaatgcaa tagagcaatt cagttcaatg ctcaacacaa gttctgaatg tcatttcacc 180
ccagagtggc agcatcaccc ca 202

<210> 3835
<211> 408
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-043-Q1-E1-E7
<400> 3835

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tgacactgtt gcgtctcata catacacggg taccatacgt tcttcagcag agtgcggttag 120
gccagaggtc tgctgtcact ctcggtctgc gtgagcgcgc tcgttatagt acagttaacc 180
catggaatcg aggatgctgc tcatgatact tggtaaacad caggtaacact ctgagtatca 240
tccgaaaccc agttgcatac cacagtcaat ttagtgagtc ggctgtgttc ggctcgtagag 300
cgatcacatc catatctgga gatcgctcaa gtggcatcct tattaactgt tgtactagag 360
tgacttgggt ttatgtgttg aagaacatga acgatgtctt tgaatgct 408

<210> 3836
<211> 240
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-043-Q1-E1-F11
<400> 3836

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ggttagtgtt ttccttactg atgatccaaa atgagacctt tgggatactt aacgggtgatg 120
atagatttga tcttgctgaa acacagaaac ttttgatccg agtgaaatta atttgcagggt 180
gcatcagaac cgtgactaca atcggggccga ctttttccat cggatgagca aacaaatttc 240

<210> 3837
<211> 439
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-043-Q1-E1-F2

<400> 3837

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gctgacagcc aaagctcccc caatagtagt accatcttta aagacaagac aagacatcct   180
tccttctggc gatggcacia aggaactctc catgaaagca ccaatgtcgg tgtcaaaacc   240
ggcggatctc gggtaggggg tcccgaactg tgcgtctaag gcggatggta acaagaggta   300
ngggacacga tgttttaccg aggttcgggc cctcttgatg gaggtaaaac cctacgtctt   360
gcttgattta ttattgatga tatgggtatt acaagagttg atctaccacg agatcgaaga   420
ggctaaaccc tagaagcta                                     439

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<210> 3838
 <211> 321
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-043-Q1-E1-F4

<400> 3838

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cgggtggacgc ggcactacac cagccgttgg ggctgggcgg cgctgtgcat tgctgcctgt   180
ctagatctgt ttcagattca gaaaagttgc ccaatacgtg tctccttgcg gtcccaccg    240
tcagcaggca aactcagac gaggactcgg cccactcat catcaattaa cgggtcaacgg   300
acggtcaaga tgacaaacgc c                                     321

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<210> 3839
 <211> 390
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-F7

<400> 3839

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ctggttgtag aaatgtatgt caccattctt ctgcaaatgc agaaacggaa gggacttcaa 120
tggtgcgtag agctgttctg taacaatcta gttagcctta cagtctaccg tgttggtgag 180
aaattcttca ctattgattt ccattcaaat atcccttttg taatccaact gtcatttcaa 240
ctaccttact gaaactgcct gacattgtat attgccacaa tctagaatgt tcttttgcg 300
gtgaaaaaaaa aacaaaaaaaa aaacattaa gcaaacaaga aaaaggtgta aaacactaca 360
tcgaacgaga tcgaaacatc aaagcacatt 390

<210> 3840
<211> 182
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-043-Q1-E1-F9
<400> 3840

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gatgcaatat atttcatcca acgagctaaa tagatgcttg atatgttcct ctctgaaatg 180
tc 182

<210> 3841
<211> 331
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-043-Q1-E1-G10
<400> 3841

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gagcagctgt cggcgtgacc tcgatcatga tatgttacag tggatgattc ttgcatgagg 120
tcgatcttcg cacatctgtg cgtctatctt tggcgcttca gctctaactt gctattcttg 180
tatgtcactc aatgctgtcc tgtgtcggtg tcgtgtgcat agtgtcggat aggaggtcat 240
ggagagtatt ggaattccac tggcatgttt gtgtcttgga ttgcagtgtc ccagttgggt 300
tatgttgatg gatccgaacg gttcctaagt c 331

<210> 3842
 <211> 294
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-G11

 <400> 3842

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 gtcttactta tcaagttgtc cacccaagaa aaggcatgt cttccgaaca ggctaacccc 180
 ttaagggcat gccagtagt actttgcttc aagggctaataaacttttgc aatgaatatg 240
 tgaattcttt aacactaatg ttgactccac ggattaaacg cactctcgtg ctcc 294

<210> 3843
 <211> 254
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-G12

 <400> 3843

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 gtggtaagtt tgaacctggt tcgcaccctg ggcaataagc atgttatagc ggtttccgaa 180
 aatgcttggt gaatttgcgg ttgcaaagcg ggcgctctaa agggtttcaa attaaataac 240
 tcgggctcgc acgt 254

<210> 3844
 <211> 422
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-G3

 <400> 3844

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gtgaaaatcg ctggaaagtt gcctttccca acgaaagtgt tacgctcttt cctttgtccc 180
gaacgcctcc aaaagaaaat atccatagga aaggaaagtt gtatgattcc tgtgataaat 240
ccttcgtcgc gaatatggcc tgagagacac agggctggga taccgcagat cgggagtgg 300
aaggtcaaag gaaccgattg acagtggact cacgttcagg ggtttttttc cagcggaaaa 360
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tt 422

<210> 3845
<211> 360
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-G4

<400> 3845

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tgaaaatctg ctctaaacgc gtctcgcagc tcctcgcagc ttcccatagt gttttctggg 180
atgcttttaa gccaatgcac gctggccctt tgagcttgag gggtagctat cttatggcgt 240
cgacatcagc tcctctggcc atgtgtaaat gtactatata atcttctatc cagactccaa 300
agtccgttgt tccagcatag gtctctatgc tcattggagt aaatcctgca gggaattcat 360

<210> 3846
<211> 285
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-043-Q1-E1-G7

<400> 3846

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aaacttgaca agttagttac tgtgtgtaga agaacaacat caccgtggga tctttgtagc 120
gctttttag tagtcaattttt accggaagg aactttatag tcgttaaagc agcaaaaaat 180
aaaaaaaaa tcgtgcactt gtctgtctgc aaaaaaaaaa aaaagtaaag gaggtttatc 240
cccacaaaaa ttcaagagtt gggaaaaacc aatctggggt tccaa 285

<210> 3847
 <211> 355
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-G9

 <400> 3847

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 tttcacttgt gagatggaag tcactgttgc ctgatcgcat ctcccgactt gggcacatta 180
 ccgtgacatg ccgtgtccta gcatatgaat gtggccttgg cttggctcta cgtgacggga 240
 gtacgtatct atctatgcat gtatgtatgg ttogtagcat gtgttaagtg gtaatactgt 300
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<210> 3848
 <211> 119
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-H12

 <400> 3848

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<210> 3849
 <211> 435
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-043-Q1-E1-H7

 <400> 3849

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 accccgacat cggcatctcc tccaaggcca tgtccatcat gaactccttc atcaacgaca 180
 tcttcgagaa gctcgcgggc gaggccgcca agctggcgcg gtacaacatg aagccaacca 240

tcacgtcccg ggagatccag acctccgtcc gcctcgctct ccccggcgag ctcgccaaac 300
acgccgtctc cgaaggcatc aaggctgtca ccaagttcac ctctcttaa gctgttcgtc 360
ttcctgtgtc tcgtagttag ctgttcgggt gtgtatgttg gcgtgttaac ctgtaagaat 420
cccaacgcga atgtt 435

<210> 3850
<211> 419
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-043-Q1-E1-H8
<400> 3850

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atcgacgacg gatcctcatc cgggtgcggtg gatgaggac ggcgagctat tgcggtggac 120
gacgtcgtcg gggaagagtc tccggctggg cggcagtcgg gaggccaacg gaggagcgtg 180
gggttttcg cggttttgcg gcctcggttt atgaatgggg aggcgaaggg gaaggtaggg 240
gaccatggct caggagcgtg cgtgtccgaa atgtanggta agttaccaga gtacccccac 300
cggttttgac accgtgatgt cgaaccggca tttccggtg aggggtaaaa gggggatttc 360
gcatgtctgg gccgccggac cgatttcgga tgacgaggga gttttcgcgc gcgtccaaa 419

<210> 3851
<211> 284
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-043-Q1-E1-H9
<400> 3851

tcgacaggca catgataggg acttactaga gtatactatg tgcttcactt aaatccttgg 60
ggctagagat gttttgctcg aatgattcac gtatggctat acgatcatgg aggtggctctg 120
attatgaagt aattattgat cgcccaagct acacgtagat gactttgaaa atcttattga 180
acatcctagc aatctatctc cttaggggca tgggtataag aagattgcca cacaggctaa 240
gtatcttttg caatatctta gtaagttaat tgagagcaat gttc 284

<210> 3852
 <211> 434
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-A10

<400> 3852

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 aacaaaaaga ggtgocgagg cgtaaggctt cggagctgac ccacgatctc ctcgggccccg 120
 agcctcctcc ccgccacaac cacgggtggct gcggccattg gtatggtaat catggctaag 180
 aagttgtcta cgaccagctt gtanacacat ttgaggtgct tgcaaattcc tgatgaactc 240
 atggtgtcga agccaacatg tgtttctatg cgtgtgtatg cgaggagaga ccggtcttac 300
 atataacaat tgattttatt gctaccaact accaactaac taattgtaca aatggaatat 360
 ggcacatggt gtagcattat gcgatcacat gnttttttct ctaatatgta cactcaacta 420
 ataaccatat agtg 434

<210> 3853
 <211> 466
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-A12

<400> 3853

ggtccaaact atccgggtcg accggcaatt aagtttcaac attaacccca acaaaattaa 60
 ttaaagtaac atgatgagat tcacatgata atccaagtac tagatactca agttgtccat 120
 aacoggggac acggctaacc atgattagtt tatacacttt gtagtggttt gcgcactttt 180
 ccccaacaaga ctcgatctcc tccgttggga ttctcgatt acaggatggt tgagaaacgg 240
 atgaccgaga catagtcttt cagaagtgtt tgcaccttac gatcgggtag acagtaccac 300
 ctacaacccc tacatctgct agtctaccac tgtaagagtt cacacaactt aatcaactat 360
 gctagagccc ataatagctt gtggctgcac acggaagttt ctagcgtgaa taatctcatg 420
 atccgtttga gcctgngtgg cggtagataa aanaaacagg caatcg 466

<210> 3854
 <211> 330
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-A3

 <400> 3854

 gtcgacggga ggattatgcg cttttgtct atgaaagtaa ctgcagtcct aacgaagata 60
 tgggtgagat cttcaacgac tcagatgatg actaggatgg tgtctctact accgttctgc 120
 ggctcgcatc tcatgcatca cgggtggcga gcttggaaac attcatctgg tatacgtggc 180
 atctcaattc tggacacatc gtgacttgca tcgtctaggg ggtcacggct gatgcgacct 240
 ctactgcat ccgccatttg aaacagcgca ccggcctatg gcgccacccg ctgcactccc 300
 acttgaact gcctcctccc cgcattcaaa 330

<210> 3855
 <211> 396
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-A5

 <400> 3855

 ggccgacggg aggatgctgt caagaagata ttccaaagag ccttgcagta ttgtgatccc 60
 aaaaagggtgc acttggctct tcttggaaatg tacgagagga ctaaacagaa tgaactggca 120
 gatgaacttt ttgatagaat gaccaaaga ttcaaaactt cgtgcaagat ctgggtgctc 180
 cgcattcagt tttctctcac tcaaggcaag gatgttgaat acatcaaata tgctgtaaac 240
 cgtgcgcttc ttagtctgcc acaaagcaag cgtataaagt ttctcacgca gactgctatc 300
 ctggagttca agtgtggggg ggctgaggaa gggagatcca gatttgagct gacctaagg 360
 gagtatccga aaagaacaga tatttggagt gtttac 396

<210> 3856
 <211> 305
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-A7

 <400> 3856

ggtaatgagc cagcccagtg gcagccagct tgatcagtat caccagtggt cacagtagac 60
 gaatgggctt gtagcaatct aacaatgtgg tctacaaaga tggtcacatg gcatcatatt 120
 aactgctgaa ctgttctagt tgtttatgaa tcttggttact ctagtgtttct atgggattag 180
 ctgatggact gattaacatg ctactagcaa tgcaactagg cagtgtttga ctaaactctaa 240
 tgcttatcat ttactgcgt tcaaaaaaaaa aaacaaaaaaaa aaaaaaaaaa aactacaact 300
 caaaa 305

<210> 3857
 <211> 170
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-B10

<400> 3857

ctggtggatg cgtgcctgct ggttgaagtc atcaagcatt ccgcctgtat tgaaagtgtc 60
 catcggggccc atgcccggtg aaaggtgcac tggggcaaga tggatgccc a taagctcgtg 120
 acagaccac caccatatgg caatgagcat cgcactcccg agatgtatta 170

<210> 3858
 <211> 344
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-B12

<400> 3858

gggctgacgg gcagaagaag aagagtacgg tgcccttctg cggctgtgtg cgccccaaaa 60
 cagtgactga gtcttgattc ggagtcgcga gcaagcaatg tcttttagtat ctcttctgta 120
 atggggttgca tgataatgtt aacaaggagc tcatgcattc ggagtgttgt ccttgttcag 180
 aaatgcccc tagtttaact agttaatcct actgatactt ttatgaatcg aagcattttg 240
 taattccgtt gcccttcgct gtttctctgt gtctgcaatg aagatatatg agaatgcttc 300
 tttcagggat ataattttca aaaaacaaaa cattaaacac aaga 344

<210> 3859
 <211> 374

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-044-Q1-E1-B4
 <400> 3859
 cgggtcaacat tccgggtcga ggggggttgtt atgagcccaa cgtagtggtt aaaaatcact 60
 caacccaac ggggaaacca accgcaacgc aaccttcaaa acaatgaagg gggaacaatc 120
 cccaatggcc caacaaaatc cggcctttaa ttaaccaacg tccaagttaa aacaatcaaa 180
 ctcaaagttc aacctgcaag ctcctaagtt aataacaaa caatgttttg gttcaaatgc 240
 cttggcctaa ttcaaacctt tgattccacg attaaaaaat ggagttaatc cttggtaatt 300
 ttaatggaa aaacgctcgg atgggtgaag ccttttctta agggcatgaa aaatgttcct 360
 taaacctttg gtcc 374

<210> 3860
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-044-Q1-E1-B6
 <400> 3860
 attcgccggc cgacgggggg cataacgcac gaaggctcca gaattaagca tccttgtcta 60
 tcccagcatg gtcgtcacc atggaggggt tgcctcactc gggtagatgt tcaccaagta 120
 tgcaagtctc cgggtgcacgt tacagcactt cttcgggtca actctacata ttgtcggagg 180
 ctcccaagct acaccgaaca aatctagaag acaccactct ccaaaaagta atacattgtg 240
 tgttgatgat gaactcctcg atcttgtgct tcaaagata atctcccccac caatcaactc 300
 agtttcacag atttggtat ggtggaagaa agatttgtgt ggaaagcaac ttggggaatg 360
 ctacaaatca atgttcaa atgttaagaatg g 391

<210> 3861
 <211> 373
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-044-Q1-E1-B9
 <400> 3861

acgaaggatt caaaatcagc atggaagggtt cttatcatgg ataagtttac ggtcaagata 60
atgtcctact catgtaagat ggcagacatc acagaagaag gggtttcatt ggttgaagat 120
ctatacaaac ggagacagcc attgccttca ctggatgcta tatatttcat ccaaccaact 180
aaagaaaatg ttgttatggt cctctctgac atgtcaggaa gaagcccgtt atacaagaag 240
gcgtatgtgt ttttcagtcc tcccatacag aaaggcttag ttgtctaaat aaaaagggat 300
tcaagtatat tacctcgtat tgggtgcactt agtgagatga atttgagta cttccctatt 360
gattcccagg gtt 373

<210> 3862
<211> 392
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-C10
<400> 3862

acactggctg acacagtagc acgcactctt gcagaggaga acggacggga tgtacctgtt 60
gtcaagccac tgactgtttt gggcccgatg agtcaacaaa ggctcaatgc taacatgggt 120
atgtttcgtc acctaccata tcggctgcac tgacgactac accgacttca tcattgagcc 180
aatccacgtc gaacacgtca cagttaaccc atatcacact gttcaagatt tcgtcgttgt 240
ccaggaggca actctgattc gcacacatct ctaacttgca acgatgtcac atctaaagtc 300
acctagctct attctgatga caacgtctca aaattctcct ctgacaagta acctttgctc 360
ttaagagcat cagcagttct tcaaatactt aa 392

<210> 3863
<211> 443
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-C12
<400> 3863

gggtcgacgg ggagaatccc tcgggtgccag tggcaggcga atccctcggc ggcggcgaag 60
gogacgacga cgcaggttat tcttcttcag cgcgcaagat cgatctagtc ctgctctgaa 120
atggggggacg agagggtcga ggccatggag attgatgggc agcagcggca agaagtcgcc 180

gccgctgtgc cggacggcctt caacgccgat tacctccgaa tctactacgg aaagctcttc 240
ccatatgggtg atttcttcaa gtggcttgca tacggaaatg atgcaaagca tcttggatgt 300
gatcagtcac acattgggagc tgggagcctt tcgtttacac tggagaatga catctatctg 360
cggtttcagt cctttgatag tgcagctgaa ctggagactt ctatcaagga gaagtgcctt 420
ttcaagattg atattggacc tgt 443

<210> 3864
<211> 378
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-C2

<400> 3864

tgacggggta gaaagacgaa ttctaacctt gacggaggga gagaaatata cgaagtgcgt 60
gtgtgtgatt ccgatgccca cagggaatg agatatgtat gcatgtgaga gagattgcac 120
aattcattca cgtatcacta tctagcgatc gtggacgtgc atcgcttgaa cataaatcaa 180
tatctacttt gtatcatggg caaaggatca atatcgattc aatgctataa agattggaca 240
ctcacatatc acattttttt ctatttaaata aaaccttttt agttgtgcat gccaaagtta 300
cagtgtatgt tcttcaaaca accaatgtag ctatcatgta catgcaccat tgttactctt 360
gcattcaaaa tcaatagt 378

<210> 3865
<211> 133
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-C4

<400> 3865

gtctgttaat aacagggtgc aagagtgcta taaaatgtga gtcctgtta gtcagcagat 60
tagtatcata tgtcatttgt gtcacatttg atgcgtccat gatccacaac tggggcgcta 120
gacgtgtatg ggt 133

<210> 3866
<211> 448

<212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-D10
 <400> 3866

gggtcgacgg gcaagccaga cttgatgaac aggctgtgaa cgatgactca gaggacaaca 60
 attacatgcc gctctccgag gatgagggtga gcctcggcga tgaagaattt atcgtgcctg 120
 aggatcccg anagcaggag cgttttaagc gccggcttat agccacgaca aagagcctga 180
 agaagaagca gcagcagctt caagctaatac aagacctgct cactgataga tggattgaag 240
 tcctgtcagc cgaagaatgc cgacttgaac gcccaaccaa aagttaccg aagtgcaaat 300
 tgctacctca attcgatgac gaagcgctgg agccagcact acaagtgcac aatgcccgtc 360
 accgaccacc acgtggccga gataaaatga caattctgcc cgaacaccaa ccggcactgc 420
 gtcaccgaac aaattgaaat acaacaac 448

<210> 3867
 <211> 433
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-044-Q1-E1-D11
 <400> 3867

gggtcgacgg gttctaagta gggagtttgt tgtgggtaac aagcatcttc tccatgactt 60
 gactgagatg ggtatctgga cacctgctct gaaaaataag ataatttatg aagatgggtc 120
 tattcagaag atggaagaaa tccctgatga tcttaaagca atttacaaga ctgtttggga 180
 gattaagcag aaaactctgg ttgacatggc tgttgatcgt ggatgctaca tcgaccagag 240
 ccagagcctt aatgtccaca tggatcaacc aaactttgca aagctaactt cgttgcattt 300
 ccatgcttgg tccaagggcc tgaaaactgg gatgtactac ttgagaacaa gggcagctgc 360
 tgatgcaatc aagtttactg tggatactgg ctttctgaac gtcaatgggg aagctcatgg 420
 cactaatggg aac 433

<210> 3868
 <211> 400
 <212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-044-Q1-E1-D3

<400> 3868

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tggcgacgct ggtgaggctg ctgcggagcg attccatctc caactccaat gctcccaggc 120
tcaggcacct cccgtctctc acgaggacct tctcgtctta cgaccagatc aacctcatcg 180
acaacgtccc cgaagaccag ctccgcttcc aaacttacga tgacactgga ttcaagatta 240
acaatgtaaa gtatgaaggg agcttgctga tagtagaaaa caagatactg acctggacac 300
ccaaaacatt tgcggatata actgctgaaa gtttatcaat cttcaaaatt gtgcacccaa 360
tcccagagat tctgaatctt ggttgccgga aatacgtcca 400

<210> 3869

<211> 394

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-D7

<400> 3869

aattcgccgg tcgacgggac aacatcaaca acaagctgca gcttgtcatg aagagcggca 60
agtacacgct cggctacaag accgtcctca ggacctcag gaactccaag gcaaagcttg 120
tgatccttgc taacaactgc cctccgctcc gcaagtctga gattgagtac tatgctatgt 180
tggcgaagat cactgtccac cactaccatg gaaacaatgt tgatttgga actgcggtgtg 240
gtaaatactt ccgagtctgc tgcttgagta tcatcgacct tggcgattcc gacatcatca 300
acgcaacacc agctggccag tacacctgtg tatgccattt tcagtgtctc gtctgatgcg 360
tcatcgaagg tggttctaga gtgtagttcc tgct 394

<210> 3870

<211> 450

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-D9

<400> 3870

ggggtcgacgc ggaaccaata gtatttctga tcttcgcttt ttgttcttat ttagtaatag 60
 ataattcatc tatcttaggt ttagatgtgg ttttatgcgt ttaattagtg tttgtggcaa 120
 atacaccctt tgggaagaca tgggtgaagt ctttgcaatc ttgctgtgca aaacatgaaa 180
 cttttgtgct cacgagatga gatgccatct tttactggag agtgatttta cgttgattct 240
 gtttgtgaat gaacatcaca ctaatttctc acgtccgact atttatcgac agacatgctg 300
 gagtttcaact ctgtattcaa tgtcttccgc aggtgtatcg ggaagggcaa tgtatccaga 360
 gtgacatgta tgagtaatga tgaccctggg ctttgccaca aatacgggtgt caactacgtg 420
 atcatgcaac gcagtatgac aatgatgatg 450

<210> 3871
 <211> 241
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-E10
 <400> 3871

gacgtcggca tctcccccaa agccatgtcc atcatgaact ccttcatcaa cgacatcttc 60
 gagaagctcg ccggcgagtc cgccaagctg gcgcgataca acaagaagcc caccatcacg 120
 tccccgggaga tccagacctc cgtccgcctc gtectccccg gcgagctcgc caagcacgcc 180
 gtctccgang gcaccaangc cgtcaccaag ttcacatcat catangtttc gtcgtctgtt 240
 t 241

<210> 3872
 <211> 441
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-E11
 <400> 3872

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 tgaaaacggt caatatgata tacgccaccc acattcccaa acgggaacga aagcgagcac 120
 tatgggacgt ctatgcgatg gagccagtcg ccccaaagtt caacccatgg tcggcctgtc 180

cgatcacttt tgattgtagg gatcacccga ccagcatccg tcatggcggt tcagccgcat 240
 tggctctaga cccaatcatt gacggatttc acctcacgcy agtccttatg gacagcagca 300
 gcagcctgaa cctgctttat caagacacag tgtgcaaaat gggcatcgac ccttcaagga 360
 tcaagccac canaaccacc ttcaaagggtg taattccagg agtanaggcc attgcacggg 420
 ctccataaca ctggaagtgg t 441

<210> 3873
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-E3

<400> 3873
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 atctcatgcc agctgctgca gtttcaaagg agaatgagag tatgaaacgg cgtgcyccaa 120
 agtctatggg atccgctcgc aagaagcagc ctgccatcgc taaccagca gcggtaggag 180
 gaaagggtga tgtcggggat gcaatggact tgtcacagta ngtggtttgt ttggtggttt 240
 gtttgggtac gagtgcctt tgagatgact accatcatgg attctttgct ctcaagtt 300
 tcaaaccatg ccatccacca tcgcacgaag tagtatgaat cagaatttta ttactaagt 360
 ttatgatgga ggtaattta ggagatgatt atttaaagtt agagctccct ccagggtccc 420
 g 421

<210> 3874
 <211> 410
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-E6

<400> 3874

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 aggcaaacgt gagtacaaat gtaccagca agacttacat cagaactaac tacatatgca 120
 tcattatcaa caaggggatg gtgggggttta actgcagcaa gccagctttg actcgggtggc 180

tatcctgatac tacgactgca agtaactctt ttgaggtggc gcacacgagt ccacatatcc 240
 accaaccaat acaccactat ggatccactc ccgtctccct acgagagcgc catccatagc 300
 actcacgctt atcttgcgca ttttaaagta tccactttca cttgtctatg aactgtatag 360
 gcaaccaga cgtccttttc cgcggacacg gctattccaa tagatgatgt 410

<210> 3875
 <211> 383
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-044-Q1-E1-E8
 <400> 3875

attcgcgggc cgacggggat gaaagaatcc attgtgagaa gagcccttgt gatcatgcac 60
 cagagggacg aagtggagta caagaggag cgccatgtga ttgtccgaa ggcttgagct 120
 gaactgaacc gatggagcta ccatggaacc ctctggccat ctgatgtgtg tgtataagta 180
 gtgctgacac tgcagccgt ttcctgagga aatttgttg gtcggtgaaa ttgagttgta 240
 gttgtactac tttgagctgt agctgtagcc ctaaatacata ttgtgtcgaa ctgaagatgt 300
 accccagtaa gttcattcat gaatgcaaca ttttggcgtt ctgcagctga gcagagtcaa 360
 tgcctaggaa aacaatacaa aat 383

<210> 3876
 <211> 431
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-044-Q1-E1-F10
 <400> 3876

ggtcgacgga ctcagcggga aggaaagcaa caagctgctg ggggtcagga tgacacagat 60
 tggttcaacg tcggctgctt cgttgtgcca gtgccacact tatgctggta catgcacgta 120
 cgaccatggc gtctgcgca cttcatcacc ttcacccgaa ctggcccatc ctcgccattt 180
 ccagcgggat aagcgagttg tatgaatacc gagaggtgag ctggctctac tcattgatat 240
 gaaattagtt gggcataact tcctttttgc aacaggaaat gaaaatgttc ccatgagatt 300
 gattgatcgt gccccgctt tggatgctgc cgttgctttt gaaccaatgt catctatgtc 360

atcggtcacg taacctctaa ggcagctgat aatatatatg atgtgactgt cttttcatct 420
aaagatgacc t 431

<210> 3877
<211> 277
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-F12
<400> 3877

tcgacgggca ttgggtttgc gacgccttgc atcgtatcgg tatacgcac ttcattctgt 60
atcttccacg aggtagctga tgtttacacc taccaccgta ctttctgcaa tgtcacttcc 120
agtacgtct atctcaccga acacctcctc atgcagttac gatcgggatg tttcttagcc 180
tacgcagaca cattactgct tcctatcatc tcatctccta atatttgccc ttctcttcac 240
ttttgtctcc ctactagct ctgtacgcac gcctatc 277

<210> 3878
<211> 413
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-F5
<400> 3878

aattcgcccg cgcacggggc acacaacgaa tatatcatct cttatgactc tgatgatcta 60
tatccaggaa gtaattcagg tggttgaaag ctgagatcgg acttctctggg gacaaagttc 120
gtcatgtacg acaaccagaa accatacgac ggcgccaagt ccttgaagag ccgatcaagt 180
cgccgttttg caaccaaaca aatcagccca cacgtttcag gcgacaatct tgaagttgga 240
caggtgtcat acaggttcaa ctctctcaaa tcaagagggc caagaagaat gcactgcagt 300
atccagtgcc ccgtaggcca gggcacgcga tccgatccat ccaaggagaa gccaccgagc 360
acctccagct ccttgtctct aaaaaacaaa gcgcctcgat ggcacgacca cct 413

<210> 3879
<211> 408
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-F6

<400> 3879

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agcagggggag tgagagcagg ggagtgcgag agcaatgaga gaggtagcga gtgtgtgatc 120
tcgaccgacc gagcgggtat atttacccca cttccgaccg ggccgggtcgg ctaacggccg 180
tgaactgccg cgccgtgagc gcgcgtggcc acgttggtcg acagatgggc ccaggccgctc 240
agaaaaacgg ttaaatacgt agtcaccacg ggtttggatt tttttgaaac agcggaccgc 300
gcgtttggta gctttctgag aaaattaaaa aagtgatagt tttttggaac cctaacctgt 360
aaactagtag ctttatgcta tttactccaa ataaccaata acaaaaag 408

<210> 3880

<211> 278

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-F7

<400> 3880

gacggggatc agtagtcgat aacggagcgt ggaggaccag ctcgacttgg agcagggggag 60
tgagagcagg ggagtgcgag agcattgaga gaggtagcga gtgtgtgatc tcgaccgacc 120
gagcgggtat atttactcca cttccgaccg ggctgggtcgg ctaatggccg ttaagtgcag 180
cgcccttagc gcgcgtcggc agcttgtctc ggagatcggc ccacgccgctc ataaaaacgg 240
tcaactctcc cctcaccacc gctttgaatt tttttgaa 278

<210> 3881

<211> 396

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-F8

<400> 3881

gtcgactgtc ttgcatatcg cgctgtcggg cgggtctcct tcgacgtgag ctgcgggtgca 60
tcacccccgg cgctgagggt acacgcgacg tgttcgtgtg tcaacacata tcatattcag 120
tgatctacaa gttttatgta ggattttatg actaaccatg tgaatgacca gttcctgtca 180

tctctctaaa tagatataag tgaagcaaga tagtttaatc ctttctacaa aagatatgcc 240
cacgctctaa caaatataag tgaagcaaaa tagcattcta caaatggcgg ttttttatgt 300
gaagagaaac aggcaatcca aacttcaaaa gatataagtg aagcacatga agcattctat 360
aaagccatac tcaaaagata taagtgaact gttatg 396

<210> 3882
<211> 314
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-F9
<400> 3882

gggtcgacta ggaaggattc aaaatcagca tggaaggttc ttatcatgga taagtttacg 60
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gttgaagatc tatacaaacg gagacagcca ttgccttcac tggatgctat atatttcac 180
caaccaacta aagaaaatgt tgttaagttc ctctccgaca tgtcaggaag aaacccgtta 240
tacaagaagg cgtatgtggt tttcaatcct cccatacaga aaggcttaat tgcccaaata 300
aaaagggatt caag 314

<210> 3883
<211> 386
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-044-Q1-E1-G10
<400> 3883

cgggtcgaca atcaaccaag attgccaaag gtgggcagcc gcaactcaagg cggttgacaa 60
gttgaacca agtggcacta atgatagaga tagggtaagt gccatttctt tcatgattct 120
tccacgctca tcatgcttct tcttggtggt tctagtgcta acttgtttct ttgtttgtag 180
ctcaatattg cacaaaactt gttccaagga gatgagaaga agaccaagaa agggagacca 240
tttaccttgc ctcatgcta tgcagaattg aaggatgatg agaaatggaa gcctcgtgat 300
gctatcgatg ctgatgatga tgagagattt ggatgatgat gaggatgagg catcaagtga 360
tgacggcaag agacgcccta cacaaa 386

<210> 3884
 <211> 203
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-G11

<400> 3884

tgcattatca tgtgaatcat gttggcaciaa tgggaaactg acatctgtag ttcaaccatt 60
 gcttcagttg ctcggcaaga caacaatcat ccaattccct gctaatttcc ttcagcatta 120
 atgcagtttc agctatcaag tcatccagcc aagaagaagg catagcaatc gatcttgcag 180
 aatcactcca aactgcttc ctg 203

<210> 3885
 <211> 391
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-044-Q1-E1-G2

<400> 3885

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 ggcaacgaca tcgacctcgt ctcccgtctg gcggccctca tcaaccagaa atgccatgtc 120
 aagaacaagg atatcaggaa tttcttggac ggcatctact tcaccgacaa gggcgccatc 180
 aaggaggagt anagaccggg aaaccgtccc gccaccaga agccgtgttt ctgcctgccg 240
 tgtntgtttc atcgtgtttg tgtctgtctg tcgtcgtcgt ctctgtgatt ttgaactttc 300
 tctagactga attttgtanc ggagttaaatt ttttaaggat gtgccgtgga acatgctatc 360
 tttaatgtta tctgcatat cgtcgccgcc g 391

<210> 3886
 <211> 388
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-G4

<400> 3886

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gaccgaccac ttttcaacaa caggctttta caatatgac cggtctgtac tgaacgtgta 120
 gtaaaccctc ccaagcaagc tgtctctgta tttgcagaca cacagagcag tgaaatcaaa 180
 gatcggatat ttgatgaatt taacagccta tcagttgtat atcagaagcc ctcttacatg 240
 tttaccgaca aggaacatcg tggaactttc gagtactcag aagatcttgc gaacttaact 300
 gttggggcag aggctccaga aaccgtcatt tctgccccaa gataccaaga aagcgatagt 360
 gatcttctgc taagtacttc agataaag 388

<210> 3887
 <211> 191
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-H10

<400> 3887

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 ggctgcacgtt tgggtcaaaa cctgtagtag ggtagttca tcccatccga actagtctga 120
 gccttgcata atcggttctg tatttgcttt gttgaatttg cggttgcac gtcgtgttca 180
 gttgctggtc t 191

<210> 3888
 <211> 377
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-H2

<400> 3888

ccgggggtcac ccacaagata atccaaggac gccaaaaagt caaagcttgg ggatgccccg 60
 gaaggcatcc cctctttcgt tcaattccat cggtaattha cttggagcta tatttttatt 120
 caccaacatg atatgtgttt tgcttggagc gtcttgtatt atttgtgtct ttgtgtttta 180
 gtaagacaca atcatccttg ctgtacacac cttttgagag agccatacat gaattaaaat 240
 ttgatagaat actctatgtg cttcacttat atcttttgag ctatgtagtt ttgctctatg 300
 tgcttcaactt atatcttttg agctatgtat ttttgcctta tgtgcttcac ttatatcttt 360
 tgagctacgt aattttg 377

<210> 3889
 <211> 353
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-H4

 <400> 3889

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 caacaaaggc aacaagaacc ttgaacactt caagattcac aacctccaag ggcctaaaca 120
 tgtgcaacca gacgtgggca tctcctccaa ggccatgtcc atcatgaact ccttcatcaa 180
 cgacatcttc gagaagctcg ccggggagtc ggccaagctc gcccgccaca acaagaagcc 240
 caccatcacg tcccgggaga tccagacctc tgtgcgcctc gtcctccccg gggagctcgc 300
 caagcacgcc gtctccgaag gcaccaaggc cgtcaccaag ttcacctcct ccc 353

<210> 3890
 <211> 449
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-044-Q1-E1-H6

 <400> 3890

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 atgtcaatga tggagtgtgt cataataaac ggaatgggtg aaagttgcat ggcaatatat 120
 ctcggaatgg ctatggaaat gccataatag gtaggtatgg tggctgtttt gagcaaggta 180
 aataatgggt tcaagatatc ggtgaaagtt gcgcggcata atagaggcta gcaaagtggg 240
 agggtaagtg tgcgtatatc catggactca cattagtcac aaagaactca tatacttatt 300
 gcaaaaatct acttagccct cgaagcaaag tactactacg catgccccta gagggataga 360
 ttggtaggaa aagaccatcg ctcgctccccg actggcaatc aatagggaaa acattcaaaa 420
 gagcacctca tgcaacaaat ttgtcacac 449

<210> 3891
 <211> 354
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-H7

<400> 3891

gccgcggcaa gggaggaaag gggctcggca agggcggcgc caagcgccac cggagggtcc 60
tccgcgacaa catccagggc atcaccaagc cggcgatccg tcgtctggct cgcaggggcg 120
gCGTgaagcg catctcgggg ctcatctacg aggagacccg cggcgtgctc aagatcttcc 180
tcgagaacgt catccgcgac gccgtcacct acaccgagca cgcccgccgc aagaccgtca 240
ccgccatgga cgtcgtctac gcaactcaagc gccagggacg caccctctac ggattcggag 300
gctaggccac caccatcgcc agattagagt gtctagggtt cgtggtcggt gatg 354

<210> 3892

<211> 374

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-044-Q1-E1-H8

<400> 3892

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taggtttcca tgatcttgat gattgctctt taaatttgca ccttgccgat tccaccatta 120
aaaagtcaat gggaaggatc aatgatgttc tcattgttgc aaatagaaat ttggtgcccg 180
tagattttat cgttcttgggt atagattgca atctttcttg ccctattatt cttggtagac 240
ctttccttag aacgattggc gcaattattg atatgaagga agggaatatt agattccaat 300
ttccattaaa gaaaggcatg gagcactttc caagaaagaa agtcaaatta ccttatgaat 360
ctatcctgcg ggct 374

<210> 3893

<211> 412

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-A11

<400> 3893

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cgaggggaag acgaggggca ggaagaaggc cagcaaggcc aagaaggcgc tggagacgta 120

caagatctac atcttcaagg tgctcaagca ggtgcacccg gacatcggca tctcctccaa 180
ggccatgtcc atcatgaact ccttcatcaa cgacatcttc gagaagctcg ccggggagtc 240
cgccaagctc gcccgctaca acaagaagcc caccatcacg tcccgggaga tccagacctc 300
cgtccgcctc gtcctccccg gcgagctcgc caagcacgcc gtctctgagg gcaccaaggc 360
cgtcaccaag ttcacctcat cctaggetag tctgccgtgt ccgttaactg at 412

<210> 3894
<211> 363
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-A3

<400> 3894

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tgcatcgaag gtggatacgg tgtccgcggt ggtgggtggta accgatgagc atggcatcca 120
tatagaacat tagagccctt atccaccggt gttcctcgga agggagaagc ctcacccctt 180
ggaattctac ctggccatgt cttgcctctc gtatttgtat tctctgcgag ctgtgaacag 240
aatcttaact gaagtttaca ggcagttttc tagttgcttg tttcaatttc cgcattgtgta 300
atggtcgatg gaatgtacgg gaattgtttg ctaaaaaaaaa aaatttaaaa aaatagaata 360
ata 363

<210> 3895
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-A4

<400> 3895

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tctctccttc tctccggcg gcggcaaggc attttggcat cttgagcca acagctagca 120
gatggcaggc ggcagggttg cacatgcgac cctcaagggg ccgagcgtgg tgaaggagat 180
cttcattgga ctcacccttg ggctggttgc tgggtggtatg tggaagatgc atcactggaa 240
cgagcagagg aagacccgat ctttctatga catgctcgag aaggggcaga tcagcgtcgt 300

tgctcgaggag tagttctgaa gtgctgaacc agaagttcta catctcgaag tcttttgtca 360
 ttttggtttt gccagtaatt tctgaaactc tctggag 397

<210> 3896
 <211> 429
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-A5
 <400> 3896

cgtattaggc actttgggtc caatgagtgg atgacatctg tcccaatggt gagccgacac 60
 gtgtttcctc caaccaatga tgattttaca cgtggaaaat cccattggt cggggttgtt 120
 aacgggttat cggatccaaa accggaccog atagcttaac ggtgttccgt tacggtggat 180
 gacacgtgtc ggtcaccctt gacgaaagca cttctgtgac gcgtgatata tcatcatgga 240
 agtggacact tctgtgatga taattttggt aatgtcatgg aacacttcta cgacagcaca 300
 ggtatgacta tcttgattct gtcataaatt tgtcatggat gtacatgcat gacagaaaat 360
 gtgacctact gtgacaaaca catatcaaca ccgaagtgta attttttgaa tgatgtttgc 420
 aatgggggt 429

<210> 3897
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-A9
 <400> 3897

cgggtctata aatcttcacc tctaaagcca gctgtttgga agttctgata aatatgtcta 60
 aggcagaatc tttgagggca atttaggaat acattggcta ttgctttaag tagaccctgt 120
 gaaagtaaac taatgtttga atatgatgcc agaagacact atttgtaagt actaagcatg 180
 ttctaatttg cactatttgt aagtactaag catgttctaa tttgcactat ttgtaagtac 240
 caagcatgtt ctaatttgca ctatttgtaa gtactaagca tgttctaatt tgcactat 300
 gtaagtaata tgggtgatga gttacctttt gtctatcaga tatgatagcg tagtagccat 360
 gcttccctga ctcaccacca agagcatact tcagttgtgt t 401

<210> 3898
 <211> 387
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-045-Q1-E1-B2

 <400> 3898

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 ccaaaacccg cgctgctgct aggccttttcc ctagtagtgc ctgctagagc cagcgctgtc 120
 ggccatgcaa aaccaggaga agggcgcgcg acaaagtagt ttttagtgca cggcgcgtag 180
 cgcgtgttgg agatgctctt agggttaggg acttagagtc agtatgtcca gtggcaaagc 240
 ttcggcagta gaagcgatgt tgtgtcgaat aaatcttctc ccaagtccag ctacacctgg 300
 acggctttca tgatggcggc gataaggagc cagtggggtt ttctcttctg gcattcctat 360
 ggggtgtcng atctggtgtg tttgggt 387

<210> 3899
 <211> 396
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-045-Q1-E1-B4

 <400> 3899

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 cattctagca ttcaaagatt tctctttcag tttgcataat aaatttttaa gatcatctct 120
 atcattgcaa gcaagaaagt ttctagttgt ctctcatcc ataacataac cttcgagtac 180
 tttaggcaat tcatatctag aatggctaga tctaataagg gttacaagat tcccagtttc 240
 aagtatttca tcaatttcag cattctcaat atcttttagct ctagcaagtt gttcatcaag 300
 aaattcaccc aatggcatag tottatcaag caaggtacta gcatcatcat aagcatcatt 360
 catataagaa gtagcatcat caataacttg tgacat 396

<210> 3900
 <211> 369
 <212> DNA

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 gggcactcag gacagtgtc tgcccatatc atcggtggcg gattcgccgc gtgaatcaca 120
 gctggcgata gcacaaaatt cagacacgac atcgacagcc gacaacggga tttcaggatc 180
 tgcccctgca ttctctcga gatgctgca ggatcagctc gatataagca tctgatcatc 240
 cacaccagag gtctcaacac tggcgctgc gacaactcta agtcccacat gacaatcatc 300
 aagagt 306

<210> 3903
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-D1

<400> 3903

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 agatattttg actgcaagg atgtatctct catcaagaag ttccatatgc tctatagctt 120
 cttcttggtt cggagagttg tggcccctac tgctcggtgt attctctaca atatcatact 180
 tccaatctca gttatgatcc cagaactatt cctaccagtc tggggcatcg catatattcc 240
 cacagtactt ttagtggtca cagccattag acatccaaaa aatttacaca ttctgccatt 300
 ttggattttg ttcgagagtg tgatgacaat gcatcgcatg agagctgccc tctctggtct 360
 attcgaatta tcagagttta acgagtgggt cgtgacaaaag aaaacagggga acaattt 417

<210> 3904
 <211> 372
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-D10

<400> 3904

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 cgggtggcaa aaacgcctgc ccagaagctt gaaattcttt ttcattgat ttctgcccag 120
 tttgatgtca accctagctt acttggtcat atgccagtca atgtgtggaa gaagtgtgtt 180
 aataatatgc ttcttggtct tgatattctg caacagtatc ctaattattgt agtggacacc 240

tcaagtggagg ctgatgagaa ggaaactcag aagggtgccg actatgatgg aacaatccat 300
 gttactggtg acctagttgc attcctggag agaattgact cggagttctt taagagtttg 360
 caatgtagtg at 372

<210> 3905
 <211> 281
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-D12

<400> 3905

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 cattggatgg gcatcagtct ggttctgtcc gacgtggcca tgctcattgg attaagttgt 120
 acagctctcc tggaggagcc tccatgtcta aggattatcg tgtcaatgct aatgttggtc 180
 tatctgatac tccacgtgtg cgcgttttgc ttctgcgaag gcgttcaatc agttgaatta 240
 catggtgttc cgattccaat tgtccatgtc taacatgccc a 281

<210> 3906
 <211> 398
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-D3

<400> 3906

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 atgtacccaa caagacttac atcagaacta tctacatatg catcattatc aacaagggga 120
 tgggtggggtt taactgcagc aagccagctt tgactcagtg gctaacctga actactactg 180
 caagtaactc ttttgagggtg gcgcacacga gtccacatat tcaccaatca atacaccact 240
 atggatccgc tcccgtctcc ctacgagAAC gccatcaata gcactcactc ttatcttgcg 300
 catttttagag tatccacttt cacttgtcta tgaactgtat agggaaccca gaagtccttt 360
 accgaggaca cgactattag aatagatcat ttataacc 398

<210> 3907
 <211> 396
 <212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-045-Q1-E1-D6

<400> 3907

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ttacgtgaag ggaacaatcc atgagtgcac ggtgcgtccc tgctctatca ctagcaatag 120

catgcaggat ggctcttgac aagaacaact tctatagata gaatttagct ttataaata 180

ttaatatgga ggaaagaaca aataattatt tgctggtaga aaatctggat tacaatagtc 240

cgtctgacaa aaaaaaaca aatggaaaat tacattaggt ggtaagaaca agaaacaaaa 300

aggcatccga tgcactact ataatagtgc tctacttgcg cttacaacg ccgacataac 360

gaagctctac cgaacccaag tagatcatgc cattgc 396

<210> 3908

<211> 376

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-045-Q1-E1-E12

<400> 3908

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gagaacaacg acgatgcccc tgatgacgtg gtagggggtg aaggtgaaca aaaggaacag 120

gaaaagactg cccgtccacg caatacaaca aaatatatga ccaagtatga gcgggcacgc 180

atccttgga cagtgcttt gcagataagc atgaatgccc cagttatggt tgagcttgag 240

ggtgaaactg atcctcttga gattgccatg aaagaactga gagcacgtaa gatccccctc 300

acgattacgc gctacttacc tgatggaagc tacgaagact ggggagttga cgagctcatt 360

gtggaagact cgtgga 376

<210> 3909

<211> 391

<212> DNA

<213> *Triticum aestivum*

<223> Clone ID: LIB103-045-Q1-E1-E2

<400> 3909

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 atggttcctt caaccgttga tctgatgct gctggatacg ctgaaagagc aaacaaagcc 180
 aagaagccag tcaagatcag tgcccggagc cttgcaaagc tggacagaaa cgaggtgatg 240
 aaagctgcgg caaaagctcg ggcacatcc tctgttctcc gaccaataga tgcccgtcat 300
 ggccatgaag ctgatattag ctccagtggc aatgccagcg tcaggagtag tatgagtgtt 360
 gattacagtg ctacacaaga atcgaagaat g 391

<210> 3910
 <211> 388
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-E3
 <400> 3910

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 tttattatgt cattgagtgg tacttccgag gccaccgtaa ttgaacactc ttgaaagtag 120
 tgtcgtaatt tccgggatgc cataaatacc gcgtatgtta tcttttgata atgtgggtac 180
 cgtgatttgc atggagtgag gacagtggat acataatata ctggcttttg aagtgggaat 240
 ttatgtccgt ccgtctctcg ttcgacgacg agcaccgcgc tcacaacttg gtgagttgcc 300
 gctatatata acaacattgg ttcgccaaca tttggcgaga ccaagattgg gttggtggcc 360
 aagatggcctt ttattgcttc caatctgg 388

<210> 3911
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-E4
 <400> 3911

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 aatagacaat ttagtctaga gtgacgcaac taatgcggcg tttgaggact tgaagagaca 120
 gctagtcgaa ccgccagttc ttgctgctcc ggttgataag gaaccattgt tattatacat 180

ggctgctaat gatcaggctg tcagtgtagc cattatggtg gaacgcaagg aggctgggaa 240
 ggaatatccg gttcaacagc cagtttatta tatcagcgag gtgttgattg agtcaatgca 300
 aagatatcag cgagggtgtg atggagttgt ccttacttcc cctcgagggtg ataaaattta 360
 ttatgttctc cgcttaatgt ttccttgtagc tatcaatgca gctgagtacg aggccttact 420
 cc 422

<210> 3912
 <211> 396
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-E7
 <400> 3912

aattcgcggg ccgacggggc aacacaaaat ttccgccgaa gcagaaaagc atcgtctctc 60
 gtctcgtcga ggaatcaaca accatgggcg gtggcaacgc gcagaagtcc aagatggcga 120
 gggagaggaa cctcgagaag ctgaaggcg gcaaggggag ccagctcgag gccacaaga 180
 aggccatgaa catccagtgc aagatatgca tgcagacttt catctgcacc acctctgaag 240
 caaagtgcaa ggagcacgcc gaggcgaagc atccgaagag cgacctcgtc cagtgccttc 300
 cccacctcac gccgtgatat ctgccaaatc ggacggagag agagagaagc tgccgtaatc 360
 cacctagtat tatcatgttc cgcaatgact ggttgt 396

<210> 3913
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-E9
 <400> 3913

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 ttcacagtgg aattccccga ctogctggca ccggatcagt gcaaggctct cgaggctgtg 120
 catccaccaa agcctgcatc taagctgacc gacatggagc ttgacgaatg cgatgagacg 180
 acgatgcatg atgtcaacat ggaggaggag atgcgcagga aagcccatgc tgctgctcag 240
 gaggcgtacg acgaggacga cgagatgcct ggaggcggtg cccaaagagt gcagtgcgca 300

caacagtaag ctagggttgg gcaagctttt tggggaccct agatcaagat gcctgcctgc 360
tctctggggg tttggtggtg ttaaccataa gctgattttt g 401

<210> 3914
<211> 391
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-F10

<400> 3914

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gaagtaccta atgttactag ttttagaggg gtggtagtat atgttcattg attttaccct 120
catgcggggg gaacagttgt ccgacctggg agatttcctg gccacattaa tgggtgtttac 180
caactgggtg attttacata ccttgacgga gacttcacat ctgagtctgg aacgtctggt 240
ggaccagtta ccatgggaga tagagttatt ggagtaaagtg tgcaaagtgt gggaggatcg 300
agatgcgcgg tttccctctt gacactatac atgacattta tgaattgggtg tggttttaat 360
ggcggagacc atactattgc tgccatgata c 391

<210> 3915
<211> 310
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-F11

<400> 3915

tgagttccca tatgacagat gaggagcatg aaatcccgcc tgtgtagata aaaagcagag 60
ttgtagcgta gcacaatcat gtaactcggt tggctgcgcc ctactgtcct gtaccatata 120
gtagaccttt gcgtgtggag tcccgaactta tgtaccaag agagaagaat gtaggaggtt 180
tagtcctgtg atgagatcgg attagcctat ttatgtgtgc caacagaaga ttatagtttt 240
gttggttcct gattgttgta ccattcaacc ccagctttgt gctgctatcg taatgttgaa 300
acttgccgc 310

<210> 3916
<211> 403
<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-045-Q1-E1-F2

<400> 3916

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gcagttcgct gagcgggaatc cggacgtgct gttcctgcaa gtcaactacg acaagcacia 120

gtccatgtgc tacagcctcc atgtccatgt cctcccttcc ttcacgttct acaggggagc 180

tcanggcgatg gtcagcagct tcagctgcac aaatgcaacc atcaataact tcaaggacgc 240

cctcgcaaag cactcgctg acaggtgcag cctcggcccg gcgctggggc tccatgaagc 300

ggaactcttg gctctggctg caaacacgga cctggaattc acctacaacg agaagccgac 360

gcoggtgccg atcgcccagg ctatcccgat ggaaactgcc tcc 403

<210> 3917

<211> 410

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-F3

<400> 3917

cggggccgacc tcaggtataa attcgtaatg gtaggcctgc accaccagct caggtacgag 60

atgatgtcca tattcctaaa ctaaaattga atattccacc atttgagggt agatatgttc 120

ctgatataata tcttacttgg gagttagaaa ctgaacaacg atttacatgt ttacaatatc 180

ctgaggagag acgagttgct gctgctgttt gtgctttcac tagttttgca tgtgtatggt 240

ggtctgaaca ttgaagatta taccctattc caactacttg ggctgctttg aaaactgcta 300

tgcgtacgcg ttgggttcca ccatattatc aacgtgaatt gcttcaaaaa ttgcagcggt 360

taagacaagg gaaaaattct gtagaagaat attatcagga attacaaact 410

<210> 3918

<211> 388

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-F4

<400> 3918

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 tggaggtctt ctttgcattg aacagggatg aagaactggc tgccaactat cttttggatc 120
 atggccatga gtttgaggaa caacaataga tgtagattg gtcttgctgt tgaaagacag 180
 aagagtcagt gacggaagca gtacagtttg gtgtcgttct tatactcttg tgctgaatat 240
 cactactact tgccattagt gcgatgttgc tgactttcaa tttcttgat cctggaaatg 300
 ctttctaagt acataatatc atatgcaaac cttaaaaaaa acatcaaaga atgcaacgat 360
 aaaaaaaaa agcgccgcc ctaaaaga 388

<210> 3919
 <211> 378
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-F5
 <400> 3919

cgggtgaagc tagttcatca atctcagcgc ctccgactac ccgctcatgc cccaagatga 60
 cctccttcat atcttctcat atcttccaag agatctgaac tttatcgacc acacaagcaa 120
 tattggttgg aaggagcatc aaagggctag accaatcatc gtggatccag cattgcagat 180
 ctcaaacaaa actgacgttc tgacaacaaa ggagaaaaga agcatgcctt cagctttcaa 240
 aatatttgta ggttcgtcgt gggtaatat gagccgatca ttcctggagt tctgcatatt 300
 gggatgggac ttccttcctc gcacgctgct catgtacttc accaatttcc tgtcgtcctc 360
 ggagggatac ttccacac 378

<210> 3920
 <211> 417
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-F6
 <400> 3920

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 gaaagttacc gcaaaagata ggattgcagg gaggttcta aatggcatg ctagggacgc 120
 aacaataaga gaagcttcta atactgagga tatgacctac agggaagcat tcccaaatca 180

gtggcagtga aagcaccctg ggtaggtctt tcttcataat taacagtttc gttttgctgt 240
gctgttgat ggtgaggtgt ggctgatatt cccttgacacg cttgaagtgc ttgaagtacg 300
cgggacgctg aagctgcttc caacctgtgc atggaaaatt tcagaaaggg aagttgtaga 360
ccatttgtag tggcagtcgg attgagaatc caaatcagaa caacccgaca gttaaca 417

<210> 3921
<211> 421
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-G11
<400> 3921

attcgccggt cgacggggat aacgaggagt gcgcgtgcaa aaccaaaaac tgcaaaaccg 60
gagcctgcgg ttgcaacaag aaactgaaag ggtgtaaccc aaattgcacg tgcacggggt 120
gtgagaatgg ctacgggatg aaaggggctg ataagtccaa tgctggaccg ggaggtacgg 180
gtggcacaag tgacgccgga ggctcaggtt ccaacaagca aataagaatc gggatgatgac 240
agtaggcttg agacatacca gagcatgatg caagtcacct tactttctta ccactcctcaa 300
gtcacctcct gttgagatat ctccactgt aaagcacagc cagggttctg tagattcctt 360
gtaatggttg gttactcgaa gcaagcacgg cgaaaactcc atgttctca accctcaagg 420
g 421

<210> 3922
<211> 340
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-045-Q1-E1-G12
<400> 3922

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gcactctaag atgaagcaga ttagagccag gttgcagatg aatccgatgt tatagcggca 120
actggatgaa ttgggatgac aaatcgagag cccaacgatg aggtacaggt ggcacatttg 180
actagtgcga ccacttcga taacacacat tgcactctcg caacgagaga atgcgtgcaa 240
catagcat catcatgcaa gtcagctcta cactacttag caccatcaca tcaactcctg 300

ctgagatctt cctcactgta gccacacaga catattcatg

340

<210> 3923

<211> 388

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-G2

<400> 3923

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catcttcaac tcatccgcgg tagcttcacg gtttggttct ctcccatcaa agaagtcacc 120
ctgcaaacca acacacacia tagtccaaac agcgggggta tgtccaagaa tatgcatttt 180
cattttatgc ttccaactag caaaattagt accatcaaag taaggacctc tacggtgata 240
atttcctcgc ctagacgcca tactctccta gggtgtgaaa ccaaggctat gaccacaaaa 300
agctatggag atcaagcaaa tggagaccaa agctctgata ccacttgtat gatcgaaagt 360
atgtctagag ggggggtgat tagactac 388

<210> 3924

<211> 380

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-G4

<400> 3924

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atgatgatga tgacgacgat agcaacgaag atggtgctga tgaagatgat gatttctttg 120
aggatgaaaa gtctgatgaa gacgttaagc caatgaagaa gcagaagggtg aatgccaaag 180
gtaaagaaaa agggaaagga aaggacaagc ttccagagga acatttcgaa ccagaagcaa 240
ctaaagaaga gttggagctc ttggttgctg atcaggatgc aggcaatggt gcaaagggtc 300
ttaacatata acgcaagagt aaaaagggca agaagggcaa ggattctgtc gaggacaaac 360
atcctcatat tgatcttagc 380

<210> 3925

<211> 417

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-G6
 <400> 3925

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 agtctgatat accgtccatt gcagcagttg ttggttctcg ggaatggcct cttgtctcga 120
 aatatagggc ttcagtgcgc tcgcagtcac caaagctcga aatgatagat tcattgttca 180
 agccacaagg aactgatgat gatggccttg ttcgggagtg tctcattgac ttctacacca 240
 gttcttgaaa aaggaaacca gatcagatca tcactcttcag ggatgggtgtt agtgagagcc 300
 agtttaatca ggtgctgaac attgaattgg atcaaataat tgaggcctgc aagttcttgg 360
 atgaaaattg gaacccaag ttcacgctga ttgttgccca aaaaaatcac aaaacaa 417

<210> 3926
 <211> 277
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-G8
 <400> 3926

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 aacagcgaca acaacacacg gagagaaaga cccgaacccg aggaaataaa ttaacttaac 120
 gccggaaacg gcaagagttg gagtacaaat tgggaaagtt atatccgggg tggtacaaca 180
 ctccaccact acgaaaggat ctggtctcga gatctaggac tgaaagaaca ccgggtactc 240
 agaacggagg tgatcctcgc ggtcccaggt agcttca 277

<210> 3927
 <211> 393
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-H12
 <400> 3927

gtgagtcgca ctagcgttcc ttctgtctcg cgatgaagga ggacagcctc gaggacattc 60
 tggacccgag catcgtgcgc gcaggacgg agacgctgct gggagaagtg gccgagctcg 120

ggaggatgtg cttgggtccc atgggtgaag agaggccttc catgaccag gtggccgata 180
 ggctgaaggc tctgcaagc acctggaggg aagagctggt gttggaccgt gccgtgacgg 240
 aaaatatggt cgtgcacatg ccacctgcag cagctccagt gcccggggat ctccggtcat 300
 cgtcatcggg agccccctcg acgggtgccg acatgtccgg aatgagcatg ggggcaccca 360
 agatgatggg ttaattttga gccttccttg gga 393

<210> 3928
 <211> 381
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-H2
 <400> 3928

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 cgcagcctgc acagcgcgtc ccagaaagcg agcgtcatga gtaggaacac aatcaatccg 120
 aacacgagct cattccgatg tccaaagtca ttctccctcg ccgatatgca agacgctgga 180
 tacaactagc tgaaacgtac gccgaattta ggttggcgat atggtgctgc tgccactgct 240
 gctactgtat aatcaagagg tctctacaca taagagagca ttaagttggt gtgttagtca 300
 gtatgtctgt tggactcttc atgaatcacc tggttggcaa tggcatggca aatgacaacg 360
 gcaacatgaa gtggccgttt c 381

<210> 3929
 <211> 362
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-045-Q1-E1-H4
 <400> 3929

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 atcctggcca tagtccggcc aggactctcc cgataacgag aggtgcttta gcgaatttag 120
 gatgtcgcca aagggcgagt gttggaagat gtccgcggcg gtgaattcca taaccggcgc 180
 ccaatccgaa tcgattggtg ggggcgcggg aggttcggag tccggcaagg agtccggaac 240
 ctcggaatca cgagtttcgc aggggacaag attagcgttc ggctccatcg tcgtggaagt 300

tggagcccc aatgcagtgt ccatccaccg atcctcggtc tgggcgatcg gctccggact 360
aa 362

<210> 3930
<211> 424
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-045-Q1-E1-H9

<400> 3930

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gaagtcgtag tgttgagatt ttatctggca taacaccagt agagtatgac ccgtagaagt 120
ttccgggttc acacagatta tggaaggcat agattcaacc catcgggtgta ccttaggaac 180
atataccgta atcttctaga gtaattaaca caagctcgga agtagagcat ggttgaggaa 240
gcagaggata caacttacca aaggcattat gtatcggaga aagaactcac caggtgatta 300
attatgaagg aactgttg ataataatcc aacaatggat atggcgatcg atagcggagc 360
tgatgtgagc atcgggtactc aaccagagga agaaggatgc aaggagatct gagtatagaa 420
acat 424

<210> 3931
<211> 384
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-A10

<400> 3931

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ttaaatggtg ctactgttg gaattaatta ggatgtgaca taagaaccgc cgacttcgga 120
attcctccat caagttgctt ttgttttaat ttctttgcaa tttttaattt aaaactctgg 180
tacacaagtg tgtctgtac cttttcatct catgtatatg ctaacatttt cgaaaatcgg 240
taaaatttgc aggggttact ttgagacggc agtaaagcca acgaatttaa aacacactcg 300
tcaattaggg tgcggtcgtg ttagcatgtg taaagtgtac atatccaca ttgcttgatc 360
ccactcaaac tccgttataa aaac 384

<210> 3932
 <211> 408
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-A11

 <400> 3932

gctctctctc tcactctgtg gtgtatttct tcctctggct ctcttctect gccccaaaca 60
 tctcacgccg ccgccgccga gggtaggggt ttgtggccgg agatccctcg gattcgattc 120
 cattcgagtc gaatcgaaga gaagagaatc gatagagatg gacgcgcagc gtgccctgct 180
 tgacgcgctg atgggttcgt cgcgggacct gacggaggag gagaagaagg agcaccggga 240
 ggtggcgtgg gacgaccccg acgtgtgcyg ccctacatg gcccgcttct gccccacga 300
 cctcttcacg aacaccaaga gcaacctcgg agtatgcca aagatccacg acccgccct 360
 aaagcaaagc ttogagtcct cccccgcta cgccgccggc ctcccca 408

<210> 3933
 <211> 389
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-A12

 <400> 3933

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 agggaaaggg gaaaagaggg aggaaagcaa ccgtgagtag tcatccaaag tactcgcaag 120
 caaggaacta aactacatat gcatgggtat atgtgtaagg aggccatata agtggactga 180
 actgcagaaa gccagaataa gagggggata gctaactctg tcgaagacta cgcttctggt 240
 agcctccgtc ttgcagcatg taggagagag tagattgaag tcctccaagt agcatcttca 300
 agtagcatat ccaagcagca tctccaagta gcatcgata gcataaccct acccgccgat 360
 cctctcctcg tcgccctgcy gaaaagcga 389

<210> 3934
 <211> 384
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-A2

<400> 3934

gtttctcgatg catagataat ccatgtagta ggatgcactc ttcggttaga aagcccgtgg 60
ctatgcttcc ctctggacgt gacatgttgc gaacgtatcc tttgatgaca ccattcatcc 120
tttcgaacgg catcatgctg tgcaggaacg tcagcccgag ttggatgata tcctccacga 180
tatggaccag cagatgcacc ataacgttga agaatgcggg cgggaagtac atctcaagct 240
cgcatagtat caccatgatc tcttctgta gccttctgag ttgcctcacg ccaaccgact 300
tccgagagat gacgtcgaaa aagttacata ggccaaatag cgtttcacgg acgtgcgcgt 360
ccatgatccc acggattgca actg 384

<210> 3935

<211> 401

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-A3

<400> 3935

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tgaatatcca tgatgctaata gatatgcaaa gccacaagct tggggaagct atgtttgatg 120
gagatgatat tttttgtccc ccaagttttg atgagcaaata ttattatgat gaaagcatgc 180
ctcctattta tgatgattat attgaaaaag tggatttgga gaggtcatga ctttatttag 240
taatgattcc actattccgg aagaggttcc aattgattat gagaacaaag ttgctatcta 300
tgatgattat tgtgatgact tgtatgctat aaagaataat tatatccatg aatattttca 360
tcatgatttt agttttcaat tggattatgc ctcacatgat a 401

<210> 3936

<211> 391

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-A4

<400> 3936

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cgccgtctcc gagggcacca aggccgtcac caagttcacc tcggcctagt ttcctggtct 120
gattcttgtg ttcccttcct ggtccttgtc tgatgaattc tntaggtagc tgtgttctga 180
cagtgtcatg cgacattgtc atcttgtaac agagtttctg cttgtgggtt tgtggctggt 240
attcggtctg gttaaatagt caacttcacc tcctcctagt attctcatct aatgtggtga 300
actgtagtta gatgtgttct gaaagtgtca tcatgtaact ttgtgctgat ggtggctggt 360
ttcagtctaa ataaatagtc atgttgctgc c 391

<210> 3937
<211> 402
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-A5

<400> 3937

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gaaatattca agcctactga tgacagcacc ctcaagtgtc cttctcctga gaagaagggtg 120
cgaaggatca gagactcccc cttcaacaag aagagcggct cggttctgca cagaatggcg 180
agcgcttcaa cagggacaga agatggtgag gctcctccct ccggcagctc tgccgagcca 240
gttgaccga gaaggacaac aaggagagg aaggcggcag tagtctacgt cgcttccgag 300
agtgaagacg atgagactga ggatgaagat gtgtcggaac caagcgatga tgacttctcc 360
gaagatgact agactccttg gctcaaccgc ccaaacattg cg 402

<210> 3938
<211> 293
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-A6

<400> 3938

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gttcaggagg atttttgagg cctgggaccc tccagtggat gtcagctttc ttggataaga 120
cgcgagtttc tacgaaattg ttcagatctt ccttggtgac ccgggatggt gccagttgc 180
atgtggtgaa agtcttagtc attgttgata atgatctgaa aatgaaaact ttgccggttt 240

aaggttatgt tggtatgccg accattgatc taagggtaag aatgataatc att 293

<210> 3939
 <211> 385
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-A7
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 attgatgcgg cgagtcaggc tcttcagca aaatctatga tattctctgg atgagctgca 120
 ggtaggccaa gctgttgacg aggatccgac ggcgaccacc aaggatataca aacaacagtg 180
 taacaactct aggaatctac atcttaatac agctctatct tcggggattc aaatctccag 240
 gctgaaatca acaagcccac ataatcttca gccttcacaca attatgttat gcttcatgtt 300
 ctatgatcag gttgtaatct gctggtgcgg tgctgccctg ctttgatttg gggattcatc 360
 tgggatctaa ttttgaccga acaaa 385

<210> 3940
 <211> 382
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-A8
 <400> 3940

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 tgacggtaga ttgttttcgt ctactgctgt actatatacc aagaggacaa gcacttggga 120
 gtgaaaaaga ccaggaaagc agtcattagc catcagtttt gacagggtag atccaacacc 180
 atctgttcat tgaattactg agcttgatgg gtagtctttc tgcagttaca gaaattagtc 240
 ttaagtcgaa ggataatgcg gtaggcaatg gtgatgtgta ctggtgaggc ttcacgtata 300
 acggagtgtc actctcgtca tctagattta cggacaagat tggttgttgg tgatgcgttg 360
 tggcaccttt aagttaaaat tt 382

<210> 3941
 <211> 397

<212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-B1

 <400> 3941

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 aatgtcttgc ttttctcttc cgatcgttct gttgcattat tataatattgc ttatgtattg 120
 tctgtgaatt ggtactaacg tttcgttttg ctagtgcata gtgatgccga cgtatgtcgt 180
 gtacaagggg aaggttcccc gagtctacga tgactgggag gagtgtcgga gacaggttca 240
 ccgattcagc ggtaacagtt acaaagggt a caccactagg gccgaggccg aatctagata 300
 cgcccgtat ctagcgggag aggggagggg gcgttgaggg aaccggatga agacgagttt 360
 catcgtgatg atgctcatcg tgatgaccgc agctctc 397

<210> 3942
 <211> 396
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-B3

 <400> 3942

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 attttgtgcg ggggagagag ggattggtaa ttttgtgcaa gagagagagg gcggggggag 180
 gagtcactca accgtcgtca catcaccctg cttccaattg aaccgcgatt ctctagcacg 240
 gtgtggtcgc cgtcttcgat atgctcattg ccctctttga agattgaggt gttgtgcatg 300
 ttgggggtgca aagaagcaca agcgagagtg gttgccgtat aaccttgat ggggatgaat 360
 tgtgtgctcg ggggagtggt tgtgtgtgtt gtgctg 396

<210> 3943
 <211> 400
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-B8

 <400> 3943

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 caaccagctc tccaatatgg acgatcactc gtatgttcaa tgaagctctt gcatctcatc 180
 agtaataagc tacattggat caaagacgag caccaaggaa ggccaaggca tatgtaaagt 240
 attctgcaca gcctcgcttg cagaattgaa acatctatcc ttgggtcatg ttctgcattg 300
 atgtcactat gaactatatt actttgttgg gcgtggaatc gatatagttt ggggtgggtgg 360
 aattttgttt gtttacatag tgaaccgatg cggtttctgt 400

<210> 3944
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-C1
 <400> 3944

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 gaaaatacct gtgttaaggg ttgtgattcc cgtagcatgc acgtatagtg aactgctttg 120
 tgatgaagtt ggagcacaat tttatttatt gattgtcttc cttatgagtg gcggtcgggg 180
 atgagcgatg gtcttttcct accaatctat ccccttagga gcatgcgcgc agtgcttttg 240
 tttttgatga cttctagatt tttgcaacaa gtatatgagt tcttttgact aatgttgagt 300
 ccatggatta tacgcacctc atccttccat tattgctagc ctctcttgtg ccacgcaact 360
 tccactggta ccatacacc accatttacc ttcctcaaaa c 401

<210> 3945
 <211> 412
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-C4
 <400> 3945

cgggtcaagac atcccgggtc gaccgggcaa tccatacaca ctcacattga tatatattga 60
 tgggcatctc catagcccggt tgatacgctt agttgatgtg agactatctt ctcctttttg 120
 tcttctctac aatcaccatt ctattccacc tatattgcta tatccatggc tcacgctcat 180

gtattgcgtg aagattgaaa aagttttgaa aaagttagag tatgaaacac ttgcttggct 240
 tgtcatcggg gttgttcgtg atttaaatac tttgtgtggg gaagatagat catatccata 300
 ctatatgatt ttgtatggat aactttcttt gtccatgtta ttttgagaat acattattgc 360
 ttagttaata tgcttgacgt attatcattt ttatgtcaat atgaactttt gt 412

<210> 3946
 <211> 397
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-C9

<400> 3946

cgggtcgacc gggaagatga atccacaggg tcctggttgg aacaagagat tgaggattgg 60
 agcctctgcc ccaagcttga caccttgccc accccgcata agcgcttttg agaaggcggg 120
 gaggggtgttc ataaaaaac ccaactgaag atgagccgtg gatcataatt tagagagtca 180
 attccctggg accaaaaact gtatggagtt tgcgctgaag atgcagactg gaagtgtact 240
 acactccgaa ttacactggg tgtgtccaaa aaaatacacc tgcagcatac attaattgatt 300
 cttgggtgga ctttgtgcat tggaaagttg tatttttagca acaaattcgt atggtaaaaa 360
 tgtcttgcct tgtgcaatgc agcccatggt gtgggat 397

<210> 3947
 <211> 410
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-046-Q1-E1-D11

<400> 3947

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 tgggcaagta gaattagccg caaagtattc ccaacaggat tgtaggctag acagcctgtt 120
 ggatgggtata gaagaggaat ttagtcagtc tacatgacta tgtaaacaaa gtgacatgta 180
 taatgccttc tagccggatt gtaaatcatt tgtcttggca gaccttttcg cttcaacctc 240
 gggaccctat agtccggagt gtatccgaat acccgctcag ttatataaga accgggggtat 300

gtgtggaaac caggtgtagg ggtcattagt gcttgaatag acaagtatcc aactagttac 360
gttatattac atgggtagta agaaacatct tcganggaga atagttccgt 410

<210> 3948
<211> 63
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-D2

<400> 3948

gtgggaggcc ggatatgtcc acactacggc agcgatgaag aaggggtggg aagccctccc 60
tcg 63

<210> 3949
<211> 388
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-D5

<400> 3949

cgggaaaagg gagccagctc agaccaaagg catgaggcag aaagtgatgg aagaaatatt 60
caagcctact gatgacagca ccctcagtgc tccttctcct gagaagaagg tgccaaggat 120
cagagactcc cccttcaaca agaagagcgg ctcggttctg cacagaatgg cgagcgcttc 180
aacagggaca gaagatggtg aggctcctcc ctccggcagc tctgccgagc cagttgcacc 240
gagaaggaca acaacggaga ggaaggcggc agtagtctac gtcgcttccg agagtgaaga 300
cgatgagact gaggatgaag atgtgtcgga accaagcgat gatgacttct ccgaagatga 360
ctagactcct tggctcaacc gcccaaac 388

<210> 3950
<211> 297
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-E3

<400> 3950

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cagaagaaag tcccggacaa gttgctggat gacaccagca tcacgcacct cttctcgatt 120
 accaagtaca ccggcttgct tgcaactggc ctcacagcta atgcaaggtc cttggcctcc 180
 caagcaggaa ttgaaccacc tgatttccgt aaaaaatggg gatatgatat gcctgtggat 240
 gttttaccaa aagggatagc agacaacgca catatatata cgcaacatgc gtacatg 297

<210> 3951
 <211> 105
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-F1
 <400> 3951

cgggtccacg gggacaccac acaccctcac agcaagatga ttcaggaagt gtccaagttt 60
 cagtcatgaa agattggaca aatggttgat ccaccaaadc aatct 105

<210> 3952
 <211> 382
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-F12
 <400> 3952

gggtcgacgc gcgggtaaaa caaaggcaac ttggaacggg gaaccgacga ataacttgaa 60
 gagaaaacac tgttgaaata attgaggaaa gaatgcaaag gcttcgcacg ggtaggggtgg 120
 atactcgatt acgaactccg gctccgagaa gaagggtggg cgcgtgggaa aagaaagaca 180
 acttcacaga gggaacaacg tcgttgagaa agaactgagg actgatcttg caaaagatga 240
 aggggatcac atcaacttga cgagaaaagc accagatgaa aagagctggc atcggaaacga 300
 acgagaacta accgcgagat cctaataaaa agttttgaag gggaagagga gtatatcaaa 360
 acacctacgt caagatttct ca 382

<210> 3953
 <211> 323
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-046-Q1-E1-G1

<400> 3953

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cacctgggtcg gaacatattc cccagcgact cacatttcag aacggaagga gtagaaagta 120
tcacaaggaa cagaggaagc aaccgtaaa ggacaatcgt gccaaagcaa cattaattct 180
gcaaaaaaaaa aaatagacac cataccaaaa catatcaaga caatcaataa acataccaaa 240
agaaaagtcg aaatcaactt tcaaactata acgtttaaca tgacaaagtt acaccaatgt 300
aaaaaaaaacc gtgtccccta aag 323

<210> 3954

<211> 398

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-G10

<400> 3954

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tggagaacgt gtttgccgat cccaagggct tcggcatcgg ccccgacggc aagtacaggt 120
gcgaggaccc caagttcact caaggcacgg cgcaagtcta aggacctcca ccgcagaagc 180
agcttgttta cgccttgttt ctcatgtact acctctctag ctacctcag cccctagtgt 240
tgtcgaaccc gctgtcgatt tcttgtgttg ttagagggtca tatatcactg taattcattg 300
ctcgctgtgc tactgcggcg cgtctgatgc cccagtttt ttttacccaa gaaatgttcc 360
ccagttcagt tgttctacag taactcaaca tccaaccg 398

<210> 3955

<211> 389

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-G11

<400> 3955

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gcgttttacc tccatcaaga gggcccgaac ctgggtaaaa catcgtgttc cttgcctcct 120
gttaccatcc agcctagacg cacagttcgg gaccccctac ccgacatccg ccggttttga 180

caccgacaag tgtgttgaat actatgataa gtttgatact tgataattgt tttgagatat 240
ggagatggtg atattaaagc catgctagtt gagtagttgt gaatttgata aatacttggtg 300
ttgaagcttg tgattcccgt agcatgcacg tatggtgaac cgttatgtga tgaagtcgga 360
gcatgattta tttattgatg gtcttcctt 389

<210> 3956

<211> 399

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-G2

<400> 3956

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gggctcagat agccctaaag tatccaaaca tgagggttaa attggagcaa gttgcaccaa 120
accacccga gaaaaactat cccacccaag agtcgctaac atgtgatgag ttaaacgaca 180
tcaatagatg gcaaaaacgc tagcccgccg cactttgaga gagacgagga gcgagaagcg 240
atatgggctg gtggattact agagctaggt atcgcacgga ggccaagaaa tatggtgata 300
gctgctacct gttgagcttg cgttggtttt tcccttgaag aggaaacggt gatgcagcaa 360
agtagagtaa gtatttcctt cagttttgag aaccaagat 399

<210> 3957

<211> 313

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-046-Q1-E1-G9

<400> 3957

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cagaaaccaa gacgggaaag gaaacatatt atggttatat acaggatata tgggaacttg 120
actatcgacg tggtttaaa gcccctttgt ttcgggtgcaa atgggtcaat atgacacgag 180
gcggggtaac ggaagaccg caatacggaa tgacaacagt ggatctcaac aatcttgctg 240
atgcagacga accattcgct ctagccaatg atgtggcaca ggttttctat gtgaaggaca 300
tgtctaccaa gcc 313

<210> 3958
 <211> 198
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-H12

 <400> 3958

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 aacagcaatg agcttgtttt atttgctgat aaggctatat aatgtgattt ctctatcaaa 120
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aacaataaaa tcataaaa 198

<210> 3959
 <211> 372
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-H4

 <400> 3959

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 aaagagatag tagcattgcc cctttttttg ggcctttctc tttttttggg cctttctttt 120
 tttggccttt ctcttttttt tgggcaatgc tctaataata ttgatcatca cacttctatt 180
 gattacaaca taaggattac aactcgatac tagaacaaga tatgactcta tatgaatgcc 240
 ttcggcggtg tatcacgatg gtgcaatgaa tcaagactga catgtattga aaataatgca 300
 tgggtggcttt gccacaaata tgatgtcaac tacaagatca tgcaatggca atatgacaaa 360
 agtaatgcat gt 372

<210> 3960
 <211> 405
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-046-Q1-E1-H9

 <400> 3960

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gcaaateccgg gacagcttac ctttttttat ggtgggtcag tatgtgtgta tgactcagtg 180
ccaccagaga aggctcaagc aatcatgctc attgcagcag cagctgctgc ggcctcaaaa 240
agcaatggca ccgctgctgt taagcctcca gcgatgtctg cgaccaatgc gatccaagcc 300
atgcttacgc ggtegctctc actccagagc acttctgtag caaatggaca acctcaggct 360
gttgcggtt cgggctcgat ttgcaagctt caggctgatt ttccc 405

<210> 3961
<211> 416
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-047-Q1-E1-A11

<400> 3961
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ccaaggcggg taccagaag atgcagaagc tcaacgccta ctgaccaaac tcaccacttc 120
gccggagggt tttgatgggt ttgtgctcca ggacggcatc atccgccaca ggggacgagt 180
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gccgagcctg aaacatcacg tgaagttact cctcgaagcg tgccagactt gcaagcaagc 360
caagccagaa aggattcggt acccggtgatt gatcgagcct cttcctgtac cttgtc 416

<210> 3962
<211> 435
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-A12

<400> 3962
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gttctgttgc ccaatatcaa caaagcta atgcatgacgt gtgataataa catctggaca 120
gacttacgan agagaatata ttgagaaatg gttcagtgac ggatacaaca cttgtcccaa 180
gacacanaaa aagctagaaa actttgcgat gattccaaat acttgcatga nggatctcat 240

ttgcaactgg tgcagagagc atgggtttcac aatctcagat tttcttccaa gcaaagattc 300
ctacagttat ttgccagagc aattgcatgg tcaactctatg tcaagtttgc acaatgtttc 360
agtacctcta attgctggga atgcaggaat tttgtgattg atcacagcag ttcattctgtc 420
gcgttttctg atgcc 435

<210> 3963
<211> 441
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-A2
<400> 3963

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aaggggcagg atggcaatga ggttttcttc cgcattcaaga gatccacaca gctgaagaag 120
ctgatgaacg cttactgcca ccgtcagtct gtggatctca actccattgc tttccttttt 180
gatggtcgta ggctccgtgg tgagcagacc cctgatgagc ttgagatgga ggaaggcgac 240
gagatcgacg ccatgcttca ccagaccgga ggggtgctttc ctggccctta gaaggagctt 300
gctgcagcct ggctgttcta tgtcgtatgc tacctttaga actagagtaa aatgtaagaa 360
gtgaaagaac ttgtgaggct atggttctgt gccatanncc tgaggggggt ctggagggtga 420
aacaacatcg gagtactgtt g 441

<210> 3964
<211> 426
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-047-Q1-E1-A3
<400> 3964

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aggcggaag aggggaaatg tggcttttgg ttaggggagg ggttcaggag gtagatattt 120
ccgcggaagc cgaaaatttg gaatcgcttc agccaaaaaa ctggcgcgca aagtgtcatc 180
agacacggta ccttattcag aactatgtac gatatgtgga catcaciaaac gattcagata 240

gcttaatctg tgtgtgatga gtttgaacgt caaatgtttt gggtcgaatt tccatgggta 300
 cagtgggcat ccacgccatt gcataatttg ggtacacaaa ggagactaca gcacacccac 360
 acttcttaat cgagcaagtt cagcaattaa acagagctag ctgagctaaa cattactcta 420
 acaaat 426

<210> 3965
 <211> 428
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-A4
 <400> 3965

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 acactccaaa gtgtcctcat atgcaccaat tttgaaggag acttggaccg tatgctcaac 120
 tcggatagtg ccagagacac ttagccattg gactttgtat ggggtgcgggt gcttcatctt 180
 gaccaattga agcttggagc atagttcttc acttgccaag ttgtggcaac tacctccatc 240
 gatgatgacc ttgacggacc ttccattgat gccgcccttt gtgtggaaga tgtggaatcg 300
 ttggtcttcc ccctattgat gttgaagagt caaggctttg gagacaacga gagcagggtt 360
 cgaatctca tcacaaaaga cttgatcatc ttcacctctg ttcatgcgtc ngtgcatggc 420
 cacttgct 428

<210> 3966
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-A5
 <400> 3966

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 atgaacttat gaaattatct gctaataaga gtgtttcttc tgatcctaata gatgtgccct 120
 tttctacttt gattgaaaat aataatgaat ctatggatgt gaattttgtt ggttgaaca 180
 attttggtta caacgcgtat aggggaaatt tcaatcctag gccttatcct agtaatccgt 240

ctaataatta tggtaattcc tacaacaatt cttatggaaa ttataataag atgccctctg 300
 attttgaatc taatattaag gaatttattt ctttgcaaaa taattttaat gctatgattg 360
 aagaaaagtt gcttaagatt gatgatttgg c 391

<210> 3967
 <211> 406
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-B1
 <400> 3967

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 ttcggccgca tcccgtccgc cgggggacag ggaggaagtg catcgtttct ccgttcgacg 120
 gtgccgaggc agcacgtccc gatctgcggt acacgtagtt ctctctgacc aagctccggc 180
 gcggcagggc ctacgccacc tgctcgaga ttccgcccgc cgccgctcac ctagttacat 240
 cccgacgacc tccaggtatc ccctacggcc ttgctccact gcccgctctc ccacgtcgct 300
 gcatgtggat cttccatagt tctttgcccc aaacgtagct cgtccggcgt actttccata 360
 ttgcattctc gtccacac ctttttagac anacacaacc gtgttg 406

<210> 3968
 <211> 415
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-B11
 <400> 3968

gggtcgacgg tctgcgacc aaacacccag agtagtgca cgactggatt acatgtgaac 60
 acataaggac tttcagtatt tggttggaaa cacgtctcag aggtgaaaac acggtttgtg 120
 angagttgta ctcgtttttc aaggggaccat cttcgactgt aatgatttgg aaaggatacg 180
 agataaatgg gaatacattt tacacgatct cccaagatca aaagagcacc aacaaaaata 240
 gcggtgtccg ctttgatgca accaccgaga ggggaaatga cacatattat ggttacacag 300
 tggacatatg ggaacttgac tacggagtag attttaggtc cttttgttta aatgaaactg 360

ggatcaatctg tcangangcg gggatatngt tagaccacag tatggaatga caaca 415

<210> 3969

<211> 421

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-B12

<400> 3969

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 ttggcatacc tggaatctgg cgtcccaaag gagaaggcca agtacaagat ctttttcgtc 120
 catggattcg actcctgcag atacgacgcg cttcaagtct ccccgagct ggcacaagag 180
 ctgggcatct acctgctgtc cttcgaccgg cctgggtacg gtgagagcga ccctgaccgg 240
 gcgccgtctg agaagagcat cgccctcgac atcgaggagc tcgccgacaa cctgcagctg 300
 ggccccaaat tccacctcat cggcttctcc atgggaggcg aaatcatgtg gagctgcctc 360
 aagcacatcc cgcacaggct ctccgggggtg gccgttctcg ggccgggtggg caactactgg 420
 t 421

<210> 3970

<211> 447

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-047-Q1-E1-B4

<400> 3970

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 gaatagatca agattccaca agaattggta aacttgagga tatcattact aatttaggggt 120
 ctgccttttc atccgtttga aataacccaa atcctcctac ctccaatatt gctaaattaa 180
 tgtatcttcc taaaaataag ggtgaatctt ctagtaagga aaatgcggat ctcaaataca 240
 taagtgttca cccaacttc ttcaatatca ttagggaacc ttttgctaca aatgaatttc 300
 ttgatttctt gcctaggagt ttgatcatta ataaaaagaa ggaaactcca aagggttata 360
 agtgttccat tgaataatta cataccaaag atgataatac ctagatctat tcttgctttt 420
 atgcctagct angggtgtta aacgatg 447

<210> 3971
 <211> 400
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-047-Q1-E1-B9

 <400> 3971

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 ataactttga tgtgtcncgt caactcgcag aacgacgaga agcttgctta ctacgccttc 120
 tccctcgcca acgcgtgcgc ggtggctcgc agcacgagga gaaacttttg cttacaagcg 180
 gtggacgtgc agcagttcat ttggtgtcag attgccagaa gtactactgt agtaccatca 240
 ttattgttcg acttccggaa gaggagaaga gccaaagcgca aggtcaccta ctaacctagt 300
 acagtactac tatagccaaa gccggtccac ctttttagag catggttaat aaatataggg 360
 ggctcttgca gcagcacatc atttagagca agtactctgt 400

<210> 3972
 <211> 365
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-C10

 <400> 3972

cgggtcgacc tccaccaaag cgatatccat catctcatcg aaagattggg aacctcgct 60
 ctatcaaaac tgaacaacga tttacacatt tacaatatcc taaggagaga cgtgttccac 120
 caaagcgaag tccaccatct catcgaaaga cgggacacct ttgcctctat caagtgggat 180
 cagattttcca ggttgctcgg tgagatttta cagtttttcg tagtttagat cgagtctgtt 240
 cttcatacct atagtccacg aaaaagccac aaaaaaatta gggtagttc atcatatccg 300
 aaccaatctg agcctttgca taatcttttt aggggttttg ctttgttgaa tttgcggttg 360
 catcg 365

<210> 3973
 <211> 414
 <212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-C3

<400> 3973

acggtcgtag attccgggtc gacgggatac ttgattgctt caagttaaac ccttttgagc 60
atcttaagtt gtcttttgat tcttctgtgg atgagggtgaa gaagcaatat aggaagttgt 120
cactgttggt ccatcctgac aagtgcagc atccacaagc acaagaagct ttcggagccc 180
tggcaaaagc acagcagctc ctacttgatc cacaggaaag agggtagatt cttgatcaag 240
ttacttctgc aaaagaagaa ctgagggcaa aaaggaaaaa agagttgagg aaagacagtg 300
catccaagat aaaatcccaa gtagatgagg gaaagtatga agagcagttt gaaagatcgg 360
acgaatttca gaagcagcta ataattaaag ttcgtgagat ttgacagac aaag 414

<210> 3974

<211> 226

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-C9

<400> 3974

cgggtcgacc tcttctccca cggatgcggt ggctgccgag ctctccaccc caagattgag 60
cagttcgctg agcgggaatcc ggacgtgctg ttcctgcaag tcaactacga gaagcacaag 120
tccatgtggt acagcctcca agtccaagtc ctccctttcc tcaagggtcca aaaggggaacc 180
caagggaagg tcagcaactt caactggaca aatgcaacca tcaaga 226

<210> 3975

<211> 358

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-D6

<400> 3975

ggagagaaaa acagagagag agagagagtc cactgcccgt cttcccctga gtccttcgc 60
cggcgaacgc ccaaagcccc gcatggagat cctccaacaa ggcaactatgt tgatgttccc 120
ggggatggat cttacgaaaa tggatcctcc aactcttacc cttcttgag cagcttggtg 180

tgtaatgttg tcgatgcatt tcacagtaca gctgggtatca cagcatcttt tctattggaa 240
 aaatcccaaa gagcagaagg ctatactcat tatagtgtg atgcctccgt tatatgctat 300
 aacttccttt gctgggtcttc tggatattaa gggaagcaaa acgtttttta catgtttg 358

<210> 3976
 <211> 410
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-E1
 <400> 3976

acggtcgatg attccgggtc gacggggaaa ggacaggagg aaagatcgat ggccttggtt 60
 ctggcatcgg gacagggtgg accattactg gatctggaaa atacctcaaa gagcaaaatc 120
 ctaacatcaa gctctacggt gtggagccta ccgagagtgc tgtcttaaata ggtggaaagc 180
 ctggaccaca caagatccaa ggaattggag ctgggttttat ccctgggtgtc ttggatgttg 240
 acatcattga tgaaccata cagggttcaa gtgatgagtc cattgagatg gcaaagtctc 300
 tggcattgaa agaaggattg ctgggttgaa tctcttctgg tgctgctgca gcagctgcaa 360
 tcaaggttgc tcagaggcct gaaaatgcag ggaaactctt tgttggtgta 410

<210> 3977
 <211> 274
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-047-Q1-E1-F12
 <400> 3977

aagacgaaga gcattccagt gactttgagc cagaagaaaa tggatgatgg gctgaggacg 60
 aggagattga ggatgatgat gctgaggatg gtgaggattc tgtcaaggcg caatcctctt 120
 cgaagaggaa gaggtctggc gcggaggatg aagatgatga tgacggtgat gatgatggtg 180
 atgatgatga gaagcctcca tcaaagcgat agtcaatttg ttcttgctga tctggtatct 240
 tttctgcttg ggccaagaag gaaaataatc ctca 274

<210> 3978
 <211> 441
 <212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-047-Q1-E1-F2

<400> 3978

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atgatgatga atatagtga gacgtggcta tggatccgt tgccatttcc acaactcccc  120
gggtgtctct cttcgactca cccacgagaa catcacgcc aagtgcctca tggctaaagc  180
cactaacaag gtaagcccca acatcaaac caccattatt cctaatcctt ctttgacggt  240
tggctttgat gatggtaagg ggtctaata ggaggtaaat gaatttgagt ctttcatgag  300
taagctcaag ggcaaatcca agaagcactt cgtttctctc ttggaacaac ttggtgaagc  360
caatgacatg atcgaggctc acgaagaaac catctctaag atggaaggtc atantcgtga  420
ctatgccgat gagatatcgg a                                           441
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<210> 3979

<211> 61

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-047-Q1-E1-F3

<400> 3979

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accggtccta tcntccgggt cgacgggccg gaagaagggc agcaaggcca agaagagcgt   60
g                                           61
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<210> 3980

<211> 451

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-G10

<400> 3980

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tctccaccac cccacttgcc cccggaccca ggaggatcgt cggagatgtc ggacaccgat  120
gagcaccact tcgagtccaa ggccgactcc ggcgcctcca agacctaccc tcagcaggcc  180
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ggcgccatcc gcaaggggtgg acacatcgtc atcaaggccc gtccttgcaa ggttggtgag 240
gtctccacct ccaagactgg gaagcatggt cagcgaaggt gtcactttgt tgccattgac 300
atctttaatg gaaagaagct tgaggatata gttccttcat cccacaactg tgacgtcccc 360
catgttgacc gccaaagatta tcagctgatt gacataactg atgatggata tgtcagcctt 420
ctaactgaga gtggcaacac taaggatgac c 451

<210> 3981
<211> 262
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-047-Q1-E1-G11

<400> 3981
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gccgacaaga aaaagaaaaa gccaaaaaaa gcgtggagac gtacaagatc tacatcttca 120
aggtgctgaa gcaagtgcac ccggacatcg gcatctcctc caangccatg tccatcatga 180
actccttcat caacgacatc ttcgagaagc tcgcccgcga gtccgccaag ctggcccgcg 240
acaacaagaa gcccaccatc ac 262

<210> 3982
<211> 383
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-047-Q1-E1-G12

<400> 3982
gggccgaccg gagcaagatc ctccgcatcc tcaaggccca tgggctggaa ccagaaatcc 60
cggaggacct caactttctg atcaagaagg cgggtggcgat aaggaagcac ctggagagga 120
acaggaagga caaggactct aagttcaggc tcctccttgt ggagagcagg atccaccgcc 180
tcgctcgcta ctacaagcgc accaagaagc tcccgccac ctggaagtac gagtctacca 240
ccgccagcac tctggtggct taaggagat ccagatctgg tgtgctctta gctgattaaa 300
gcttgattgt tctggaaacc attcttatgt aatgctttat gatagtttgg agccaagcag 360
atgctgcaaa ttttctatgt ttg 383

<210> 3983
 <211> 422
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-G8

 <400> 3983

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 atcggatgtg tcatgtaaaa gcatgacaga agcacaattt tttaaaaaag accaatgttc 120
 ggattggcac aaaaatcttg atttagttcg cacgtcaaga ttttacttaa gttttttggc 180
 ttttcgagct tatggcactt ttagctatt tgtatgtttt tgtttcagga agcgggtcac 240
 cttcatgacc gagatgccca gcattataat tcagctcgga agatctcttc cgaccacaa 300
 ctcgatatct ttcccaccta actacacctc ggcgttaaca atacacacgc cacatcgga 360
 gttcgggact agttcctgag cagtgtaatg ccagacgcat ttaaagcatt ggcaacatta 420
 ac 422

<210> 3984
 <211> 259
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-H10

 <400> 3984

ccgggtcgac gcggagcatg catctagagt attaagttaa aaacagagta acgccttaag 60
 caagatgaca tgatgtagag agataaatc atgcaatatg aaataaacc cactttgtta 120
 ccctcgatgg caacgatata atacgtgcct tgctgccctt tatgtcactg ggtaaggaca 180
 ccgcaagatt gaacccaaag ctaagcactt ctcccatggc aagaactacc aatctaattg 240
 gccaaaccaa acgggtaat 259

<210> 3985
 <211> 284
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-047-Q1-E1-H2

<400> 3985

ttccgggccg acgggataaa gaagttgaag acaaaggctg acctgcttga attttgagat 60
cggaggtgtc atgtaaaagc atgacagtag cacaattttt taacaaagac caatgttcgg 120
attggcacag gaatcgtgat ttagttcgca cgtcaagatt ttacgtaagt tttttggctt 180
ttcgagctta tggcactttt tagctatgtg tatgtttttg tttcaggaag cgggtcacct 240
tcatgaccga ggtgcccac accaccaag atat 284

<210> 3986

<211> 334

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-047-Q1-E1-H4

<400> 3986

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caacagagtg gtgggtggaat ttaactacag caagccagct ttgactcggg tgctatcctg 120
tactatgact gcagataact catttgaggt ggcgcgcacg agtcactca ccatatcaat 180
acaccactat ggatccgctc ccatctccct atgagaaggc catccatagc actcacgctt 240
atcttgaca ttttagagta tccactttca cttgtctatg aacaatgcaa gtgttccaag 300
tagtccatat ccgcagacgc ggctattcga atag 334

<210> 3987

<211> 447

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-047-Q1-E1-H6

<400> 3987

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tcgagaccta caagatctac atcttcaagg tgctcaagca ggtgcacccc gacatcggca 120
tctcctccaa ggccatgtcc atcatgaact ccttcatcaa cgacatcttc gagaagctcg 180
ccggggaggc cgccaagctc gcccgctaca acaagaagcc caccatcacc tcccgggaga 240

tccagacctc cgtccgcctc gtcctccccg gggaactcgc caagcacgcc gtctctgagg 300
gcaccaaggc cgtcaccaag ttcacctcct cttagactgc gtcgcctgta tctagtagca 360
aatgtagttc tatactggtg gcttagtgct tgtccgtgga ctctggttat ctgcangtta 420
tagtagtctt acttttggat gaaaatt 447

<210> 3988
<211> 264
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-047-Q1-E1-H8
<400> 3988

acggggatga tcaggcaccc tcaattgcag caccgcgcgc acgcggcatg gttctgtaca 60
tgtcactgtc ggttcgaaca gcacagcacg gtgctcggcg cgcttttcaa tgccgtcgta 120
gctccacgtc aagcggattt aatatctcat ttgctgttct gctaggatca tgtgtaagac 180
cgtcgatgca ctgcatectt tgggggctgc gcacatgtga tttgtacgga taccctgcac 240
tgttgatagt cctatttgtg caca 264

<210> 3989
<211> 433
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E1-B10
<400> 3989

cgggtcgacc gggccttcaa atacatccgg gaggtgctca agtgggagga ggacaaggac 60
gagaactact accaggagga gtccttctac agcaccaccg agatgagctc ctcccccttc 120
atccgagccg aatgagaccg cgtcccctgc ccccgccgaa ggccggttcc tataactaatg 180
atgcgccggtt tcgttttcgc cgccagtcga ttccgttttg cgccgtacaa aaaatcattc 240
attgattggtt ggtctgtaaa aagttaatct gcaggttttt gttcttctga tggatgggat 300
gtttttcatg tttgtgtctc ttggctccttg agatagagat gaagcatgat tgatctgttg 360
gtgtgtatatt agtgagtggg actagcagtt ttcttctagt cagtgcacag attgacctgt 420
tggcaccaaa att 433

<210> 3990
 <211> 402
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-048-Q1-E1-C10

 <400> 3990

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 ccttctcccc tcttctcct tccctccttc tcctactagg aataggaaag aggaggggaat 180
 cctacttggga ctggggagtc ctagtangat tccccacacc tggcgtgccc cccttggggc 240
 ggccacctct tccctcccct cttttatata cgtggccagg gggcacccca tagacacaca 300
 agttaatcct taccogtgtg cagtgcccc ttccatattt ttccacctcg gtcatatcat 360
 cctagtgttt acgcgaatcc ccgcgccggt aacttcatca tc 402

<210> 3991
 <211> 435
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-048-Q1-E1-C12

 <400> 3991

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 ggcggtcaca ccgttaggcg taccatgcgc aatcgtcgcg ctgtagcact tccctttgat 120
 aatccatgcc aagcaaggtt catgcacctg gtgagacatg ttgtagtacc ctgtaattct 180
 acaaccacac atcctgattt tatgtacgac tactagggtca aacaaaaaga aatggggttg 240
 gtcattcttt aagaacatct ttgcttggtt agtggatgag gggactcgat tttccaagcc 300
 aaacatcttg tcacgaatta ttataggctt atgaggacga cttgagaatc agaattgtcaa 360
 gctgaacagc tgataacata ggtcacttat tagaggctac agccaaggaa aagggttgaa 420
 gtggcaacat caaca 435

<210> 3992
 <211> 430

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-D10
 <400> 3992

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 actttgaagc acaagtgtgg aaaaaaggat agtagcattg tccctttttt atttggcctt 180
 tctttttttg gccttttttt ggcctttttc tttttttggg acaatgctct attaatgatg 240
 atcatcacac ttctgtttat ttacaactca aagataacaa ctcgatacta gaacaagata 300
 tgactctata tgaatgcctc cgacggtgta cggggattgc gatgaatcaa gaggacgtg 360
 tatgaaaaat tatgaaggat ggcttggcca caaatacgat gtcaactaca tgatcatgca 420
 aagcaatatg 430

<210> 3993
 <211> 312
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-D11
 <400> 3993

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 cggccaaggg gaaaacgagg ggcaggaaaa agggcaccat ggccaaaaaa acctttgaga 120
 cgtacatgat ctacatcttc aagggtgctga gacaggtgca cccggacgtg ggcatctcct 180
 ccaacgccat gtccatcatg aactccttca tcaacgacac cacaagcatc cgcatccgca 240
 tcccatctca catcccatct cccacacgc tctaaccacc agcagcacca gcacccatgg 300
 cacccaaagc cg 312

<210> 3994
 <211> 337
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-D12
 <400> 3994

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 ccggacgtgg gcatctcttc caacgccatg togatcatga gctgcctcat caacgacacg 180
 agaaggatcc gcatccggat ctacactcac atccatcttc gccacacgct cgaaccacca 240
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 gctgggaaga agcccacggc gggggaagcg gggcgcc 337

<210> 3995
 <211> 391
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-G10
 <400> 3995

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 agtagacca caagtcagcc tccaaatctg tcccaaacag cacacaaccc gaaatttctg 120
 gccagattca aattaacttt aaaactaaac ataccttaat ttaaattcaa tgaaatttta 180
 cccgcacaaa aacaatgaaa tttaaaatat caaatccga aagaaaaaaaa gtattttgga 240
 acaaatgtca tgtttgctat atttttcatt ttacaacca tttattatta cttatagccc 300
 atttcttatt acttatagcc cattttctgg gaaaaatgca tccctcctcg tcttgaaaga 360
 tttccggccc agcagggcat agaaaagcaa g 391

<210> 3996
 <211> 416
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-G11
 <400> 3996

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 ctgcggtgag ctgggatggc ccgaaccgct tttccccctt catctcgaat catctccaaa 120
 tccggtgataa atcaaaccac aaaagaatgt atagcatggg gactttggaa tataccctca 180
 tgtatggcct ttctcttagc cgcccagatt gcccatagcg tgacggatag cttgatgaac 240

agctcatgag ataatgactg catatgtgta aataaccatt gtttcgcatt gggttctgag 300
 gtggctgcga tttgctgtcc aagctcttca tcaaccagcg cccatgtaca cctcgacatg 360
 gtgcaatcta ctagagagtg cttccatgag tcgggcgccc cacatattcc acatgc 416

<210> 3997
 <211> 420
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-G12
 <400> 3997

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 gctttcataa gaggcaacaa cgtcctctac atcagcacgt cgaagcggtc cctcaccgac 180
 ggagcatagg cggagtggag cattcacatc atcatgtaat ttgaaggctg ttaacccgat 240
 tattggttgt ggtgatctga ctgggtctgc ctttgtcaat ctctgacctc ctgtctgctg 300
 tattgcctgc tgatggagac ttatctggaa ccattacgat tcgatgttat cttgtgtttt 360
 tagcttgagg atgtttgtgg ccaagattct gcgatcagga tatagataag atttgtgttt 420

<210> 3998
 <211> 137
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-H10
 <400> 3998

gggtcgacgc ggacctacaa gatctacatc ttcaaggctg tcaagcaggt gcacccggac 60
 atcggcacat cctccaaggc catgtcaatc atgaactcct tcatcaagga catcttcaaa 120
 aacctcgccg gcaaggc 137

<210> 3999
 <211> 387
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E1-H11

<400> 3999

cggtgcggcc ggacctacaa gatcaagatc ttcaagggtc tcaagcaggt gcacccggac 60
 atcggcacatc cctccaaggc catgtccatc atgaactcct tcatcaacga catcttcgag 120
 aagctcgccg gcgaggcggc caagctggcc aggtacaaca agaagccac catcacgtcc 180
 agggaaatcc agacctccgt ccgcctcgtc ctccccggcg agctcgccaa gcaagccgtc 240
 tccgagggca ccaaggccgt caccaagttc accagcaact acggttccgt cgcggtgtct 300
 ctagggttcc gtccccgtgt tctcttctag tagcttttgt gtcgccgtcg gtcgtgccca 360
 tgtgtatcgt tataggtagg ttacgcg 387

<210> 4000

<211> 405

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E1-H12

<400> 4000

tgtttggaat ttattagaat actctatgtg cttcacttat atcttttgag ctagatagtt 60
 ttgctctagt gcttcactta tatcttttag agcacggcgg tggcttgatt ttgtagaaat 120
 tgttgatctc tcatgcttca cttatattat tttgagagtc ttctagaaca gcatgatatt 180
 tgctatgggt ataaaattgg tcttagaatg acgggcatcc aagttgggta taataaaaac 240
 tatcatagaa agtgaattgg atgctatgat caatttgatg cttgataatt gttttgagat 300
 atgaggatgg taatattaga gtcattgtag tagagtaatt atgaatttaa ggaatacttg 360
 tgttgaagtt tgtgattctc atagcatgca cgtatggtga actgc 405

<210> 4001

<211> 331

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-A10

<400> 4001

ggctgcacggg ctatcatgct tcacttatat tattttgaga gtcttttaga acatcatggt 60
 atttgctatg atcataaagt tggctcctaga atgatgagca tccaagttgg gtattaataa 120

aaactatcat agaaagtga ttggatgcta tgatcaattt gatgcttgat aattgttttg 180
agatatggag gtagtgatat taaagtcatt ctagttgggt gattatgaat ttaaagaatg 240
cttgtgttga agcttgtgat tcccgtagca tgcacgtatg gtgaaccgct ttgtgatgaa 300
gttggagcac aattttattt aatgattgtc t 331

<210> 4002
<211> 372
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-048-Q1-E2-A2
<400> 4002

tggcgtgaga tgaaagggcg agagggaagg gtccctcggt ggcaaaaaag gaggttgcct 60
gaagtcttc accctgggggt ttaccgggt tcaaagttac acggttttcg caggaccttg 120
tcgttctcat gcttgetgct ttcctaaatg tttgtttgct tgtagtcttc ggttagggca 180
aacaatgac ttttcttttc tacatttttc cgagcttgggt cgctccgttg agttgtaagc 240
ttccaagaga gttcctatgt atcgttatgc cgatgaggtt tgtatgtgggt tgtaattcct 300
ggtcgggtga tggttttgggt aattcaaagc cgggctcttc tcgagccac gtttaaaana 360
aaacttacta tg 372

<210> 4003
<211> 417
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E2-A3
<400> 4003

acgggataga ccaaaacgaa ttcagtggca tttgggaaaa accacaagat gctgtccatg 60
ggaaacaaaa gtcccctgta acgaatgggt ttaaacygga agccaaagggt tccgcagaaa 120
aaacccctc cacggctgct cctccaagcg ttaacctacc cggcaaaagt tggcccaaac 180
agaaccggcc gagaaagaac cctgcccga cggaaaagaa ccctgtcgtt gccaacgggtg 240
ctgtcaagac cgggtgtagct gcttgatcgc ataccgatc ctcccagcta gccatgaaga 300

acaaacggac ggtgctggcg aaccaggcga gacatgcggg gtcccaaggt actgatcacc 360
aaaggtggct gctggaaagc gggtcggata gttaggtttc cctagctctc tcctttt 417

<210> 4004
<211> 438~
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-A7

<400> 4004

ggaaccacag cggcgcacaa accctacatc cagatccatc ccacctctga cctaggctat 60
catgacttcc atcgtctcca agctcgcgcg ggcagccgtc gcaaccacg cctcttccgc 120
accgattgga tgtactgctg gtggcagtcg ctctacggcc cgggtgtctcc ctgggctctg 180
gctgactggc ggtaccatcc gacgcatgtg tagaggcgtc tctcctgcag gaggtcccaa 240
ttcagaagaa gagaaaggca gacccaactc ggaagatgct gtagatgctg cagccataga 300
tcctatagat tatctccatg ttcaagagga tttcctcaag tcgaaggaag ccctgtgggc 360
cttgtaagac tactggcgca agtatcatgg catctcgcgg gacagaaatg agattgccag 420
acggttcaac atattttg 438

<210> 4005
<211> 452
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-048-Q1-E2-A9

<400> 4005

gggtcgacga ccacaacggg accagcacca ctgctaactc aatgatgggt gctatctctc 60
acaatatata tattactttt atatgtgtca actttaaggt ttatatgttt gggctgtgct 120
tttgtgatat tttggactgt cagtgccttg actgattttt accatctcaa tgtttggcat 180
tcatgtaggt tttagcatta cttctgcgct cgtggtatgt taccttgcca tgtcgcacat 240
ttaatttgtc ttgtatgtgg tgtttgtcca tctgctgagt tgtatactta ttactcgttt 300
tgtctgcgcc ttttcttcat tgagtttact tattgatgct gttctgttgc cctctatgct 360
gttgtttgtt tgctctgctg gttcaataca cctgttgccc ctaaatanat caattatata 420

tgcaatttga gtctgccact tttttgtttc ct

452

<210> 4006
<211> 247
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-048-Q1-E2-B1

<400> 4006

aaaagctacc tctcaacca cccttcaatt aaaaaccatt cggacccctt gcccacacc 60
aaggtattga agaaggcaat ccacctatac aggaacccctt gcgcgggcaa cggaatcaaa 120
ggttccccca aaggttgcac tttcaaacctc ccctgcttgc ggcgtaattc gtttgggtggc 180
gggtgggtgcc tgnccgggaa acatgccctt tgttgccctgc acattgacgg ccattaagaa 240
gagtgtgta 247

<210> 4007
<211> 443
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-B3

<400> 4007

ggtcgacggg gaaaccgaac tggaggaaaa acactttaaa gttaaccacc ataaattata 60
ttacaaaccc ttggttaata caacttcggg gaatttcggt tacatcaact cgaacatgat 120
gtccttcgag cattggccct ctatcaagcg ggcaccctct aggacgtcct caaaatagcg 180
ctctggcttg cgggtggtcct tgccctccggg tggaccctca actgccacga tggcggcctt 240
cattttcgcc cagtgcacat tgacacgggc aaaggccagc cgcgcacctt ctatacatga 300
cgaccgcttg accatgacaa tttgggacag cgcgtcaacg agtcgctgca ccaggccaaa 360
atagctgctt gggacggggt cggctggcca cagccggact atgacgtccc tcatggccaa 420
tccggacacc ctatgcagct cgg 443

<210> 4008
<211> 421
<212> DNA

<223> unsure at all n locations
 <223> Clone ID: LIB103-048-Q1-E2-B9

<400> 4010

cggggtcgacg gggaaagtgg ctatgaaatt ctcccacccat gatgctgcgg gtccttcaag 60
 ctgatgtgcg gcaaactcca ccttttccgc attcatgcat cctgctgtgg tcaactctct 120
 agctgtcttg tggagccaat catctactac tatcggtcgc gtgctactgg aaaacaccgg 180
 tggattcagc ctaagaaaac gggctaagt atcaataggt ggtggtggtg gtgggttggt 240
 gttgttggtta ttcccttggg tctaattctg gactagtaac tgcataatg tggtctgctg 300
 ctggatcaac tgagtgcgct ccggtgggaa ggtaaaccgc gggtcacgtc tcggaggcat 360
 ctgagggttt agaaaagatg agatttaaga atagangggg gctaaagaga aaacactacc 420
 catatgcaca 430

<210> 4011
 <211> 417
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-048-Q1-E2-C1

<400> 4011

ggcaaattaa taaaaattct gtacaccatg gtaaaaacaa tcattatacc ctgggtccaaa 60
 tggataaaaa aattactttg cttccaagga cccctgattc aattttgaaa gatgatatta 120
 atagagctaa taaagcaaaa caggagaaaa ataagactga aaatcatatt gtggcaaaaag 180
 aatttgagca acaaatgcgg cctaataata aacaatctag tggtgcttct gaaattaaat 240
 tgaaaagtgc atgtttactt gccaccaa atgatattaa tgatctagat tttagaaaat 300
 ctatttgcta tgcttttgag tgcaaagagg cattattttc attcgaggac gtgccttctt 360
 ctttgccctc tgctgtcact aacattttgc angagttcgc tgacgtcttt ccacaag 417

<210> 4012
 <211> 368
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-048-Q1-E2-C2

<400> 4012

tcgatggaga ataaaaagga atgaaaggtg tcggaggaaa aggtgacaca ggaggaactt 60
accaggggttt atcggaaagg aaaaggaaag aaaggtcatc gacagaaaaa ctcaaggaag 120
aaaaacttgg gtattaagaa cgagactcgt caaaagtcac atcacgcgag atgcgcaagc 180
gacgacctac aggatcccaa catcgatagt ccttgtgcct atcgctgtag ccaaggaaaa 240
cacactcaac cgactgagta gtcagtttgg tgcgttctcg gggggcaaga agaacatagc 300
acaaacatcc aaacatacga agagctgagt agtcaggaga gagaccagtg agacactcca 360
tangaata 368

<210> 4013

<211> 404

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-C3

<400> 4013

ctctgaaggt gatcaattac caagacttca aagcctgcaa aggatacccc aaggaattgt 60
ggctgttcag gtcaacattg gtgtattaat tgtgtgcacc gctttcttat ctggcgagcc 120
tgcaaccagg ctccggtctc aagaactgca acagctgata cctgcattgc ttgaattcat 180
ggctgtctgc aaccgtgcaa tccgtgtgca ttttagattg ataggggaag aagaccagga 240
gttccacacg caacttgtca atgggtttca gtctcttact gctgagcttt ctactatat 300
tcctgccata ctttcggagc tatgactgta gcaaggtggc aggcagttag gtagcatgtg 360
aatggttggt tgatttttca gttggggatc tgctccaaat gttc 404

<210> 4014

<211> 375

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-C4

<400> 4014

gtcaggaaaa ataggggcgg tggcgtcatg ggctcaaatt ccaaggcaaa aacaaaggca 60
agggaaaggt tcaccgcaaa ggaggttgcc caaaggatga actaaccxaa cccttatatg 120

tgaaagcata tgccatgtag tttccctttc agtgtgtcct gatTTtgacg aggaactcga 180
acccttttag cagcagtgtg gaatcgtatt gtggTTTTct gaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
aaaaaaaaaa aaaaaattta aaaaaaaaaa aaaaataaga aaaaaaaaaa ttaaaaaaat 360
aaaaaaaaagg ggccc 375

<210> 4015
<211> 369
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E2-C5
<400> 4015

cgggatagcc taattcatcg tggccgataa gaccatcctc tccatggcaa ggaagcactc 60
cttcgaggac gcgcgggacc atctcaagaa tacctccttc aactaatcag cctataagat 120
atctattatt agtactgtaa tgttcaggca gcacttatgt gatatcaggc gaggcttgca 180
gacatgcagt ggtgtagtac cgcgcttctc tgcgcgcaag atcttatctg atgaagtgat 240
cttgatttaa tatgaatgaa gggactcgat tttccaagcc aaacatcttg tcacgaatta 300
ttataagctt ataatgacga cttgagaatc aaaatgtcaa actgaacagc tgataacaat 360
aagtcactt 369

<210> 4016
<211> 352
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-048-Q1-E2-D1
<400> 4016

aaatccatgc tgccaactct caaggtcctc ctcatcccg ggatcctcaa ccaaccgccg 60
ttcggtagcc cttcctaagg ctcaactgaa cttgtaaata aaatcccggt accaacccaa 120
atccttttcc tttttttgcg gaaaatcacc tggttaattg ttacctgccc ttcaatcaag 180
gaatttcatg tgaaaataaa aagttccaga aatttcaa attatatgtac cttctctaac 240
gtccaagatg taaccaggat attaagttcc aggaagttta cttaatatcc tggaagacag 300

agatgctggg ttaagtttca agagatatgg atttttgact aagttgaatt ta

352

<210> 4017

<211> 258

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-D12

<400> 4017

acggggtaga tcacaaggcg gagaagcggg cgccggcgtc caaggaggcc ggccggcgagg 60
ggaagacgag gggcaggaag aagggcagca aggccaagaa gagcgtggag acgtacaaga 120
tctacatctt caaggtgctc agtcaggtgc accctgacgt gggcatctcc tccaaggcca 180
tgtccatcat gaactccttc atcaacgaca ccataggcat cctcatccgc atctcagctc 240
acatcccaac tccccaca 258

<210> 4018

<211> 318

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-048-Q1-E2-D3

<400> 4018

ccctccta at tgcaagagca accaggcaag ccccccttt gatcaccaga tatcgcttac 60
tctaattctt actgcttgca ttaaagtagt gtaccatgtt actgcttttc gatatactat 120
tctgatgcat agcctatact tgctactatt gttactacct ttacctgcaa tcttatctgc 180
ttagtctagg atgctagatt tccatcagtg gccctacatt cttgtccgtc tgctgtgcta 240
tactatcggg ccgtgatcac ctgngcgggtg attcacggca tatacttata tactatatac 300
atgacacatg tgatgact 318

<210> 4019

<211> 286

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-D4

<400> 4019

acggggagtgt tttgattatg gcgaaggcta tgaacaatcg ggcttcactg gcatgatttc 60
gataagtctt tacaacagta tggccacttt gctttgctaa tgaacctagt cctgggtatca 120
gatgcaccaa tcagggatgg gctccaccct ttcaggggcc atgaatagac caccatgaaa 180
atTTTgctac ggtaagatcc tTTtaagaac ttaccacagt gatattaatc tcatgctagt 240
ggagacatag tgcccttacg aactccttgg gtcaacgtca gtgact 286

<210> 4020

<211> 433

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-E1

<400> 4020

gacgccgcaa ggaggaacaa caccaggatg cccaagtatt ccaagttcac gcagcaggag 60
ctgccggcct gcaagccgat ccttactcca aaatgggttg tcccgggtgtt tttccttgtc 120
ggcgtcgtct ttgtcccagt tggcgtcgtt tcgctactag ctgcacaaga tgTTgttgag 180
atcattgatc ggtatgatca tgcatgtgtc ccacctaaaca tgactgataa caagcttgcg 240
tacatcaaga atgatactat atccaaagag tgcacaagga ttctcacggt taaaaaggag 300
atgaaacagc caatttatgt gtactaccag ctcgataact tttatcagaa tcatagaagg 360
tatgtgaaga gccgaaatga tgcgagcta agagaatata ggaagtcaga tacgacaacc 420
tcatgtgacc ctg 433

<210> 4021

<211> 395

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-E2

<400> 4021

ggatgagaat ctaagttggg tataataaaa actatcatag gaagtgaatt ggatgctatg 60
atcaatttga tacttgataa ttgttttgaa atatggaggt agtgatatta aattcatgct 120
agttgggtga ttatgaatTT aaataatgct tgtgttgaag ttagaaagtc ccgtagcatg 180

cacgtatggt taaagtgtg taacaaattt gaaacatgaa gtgtacctgg cttgtgcatc 240
 cttacaagtg gcggtcgggg acgagagatg gtcttttctt accaatctat ccctctagga 300
 gcatgcgtgc agtgcttgat tttttatgac ttctaaattt ttgcaataat tatatgagtt 360
 cttatgacta atgttgagtc catggattat acacg 395

<210> 4022
 <211> 172
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-E3
 <400> 4022

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 caagagcaag gcaaaggaaa agctcatcgc caacgacgct gcgcatagga tgaactaagc 120
 ctaaccttat atgtgagagc atatgccatg tactttccct ttcattgtgt cc 172

<210> 4023
 <211> 333
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-E4
 <400> 4023

tccatagcaa ttcagagata tattgccatg caacttttca cggttccttt tattatgaca 60
 cacatcatca ttgtcatatt gctttgcgtg atctttagt tgacatcgta tttgtcgcaa 120
 agccatcggt cataattctt tcaaacatgt cactcttgat tcattgcaca tcccgttaca 180
 ccgccggagg cattcatata gagtcatatt ttgttctagt atcgacttgt aatttttgag 240
 ttgtaagtaa ataaaagtgt gatgatcttc attattagag cattgtccca tgtgaggaaa 300
 taaaaaaaaag agaaaagcaa aaaagaaggc ccc 333

<210> 4024
 <211> 404
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-F2

<400> 4024

ggaggcgaaa ggcgaacagc cgaacgtgac catctacatc aataacotca acaaaaagtt 60
caaaactcaaa ccgcttaaaa attccctcaa ggccgttttc ccccatTTtg ggaaaatcat 120
tgaggTgctt gcttttaaaa ctttgaagca taaagggcaa gcatgggttg tgttcgaaga 180
tgttgcatca gcaactgagg ctttgaagag gatgcaagat tttcccttct atgacaaacc 240
catgaaaatt caatatgcca agaccaagtc agatgttata gcaaaagctg atggcacctt 300
tgtaccccgga gaaaaaagga agaggaatga tgagaaacct gaaaagaagc agaagcgtga 360
gcagcaccac gatgttaacc aggctggcgt gggcatgcat gcct 404

<210> 4025

<211> 426

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-F3

<400> 4025

tacaggtaaa cccacagtac tgaatgacaa gagtggatct gaaaaatctt gggTacttg 60
acgaaccgtt cgtcctaccc aatgatgtgg cacaggTtat ctatgtgaag gacatgtcta 120
ccaaaccgag aaaaagaaaa gataaggaag cgaatacatc atacgatgag ccaaagcgcc 180
acatagTtct ttcaggaaaa agggacatcc tgggagtTga cggcaagaca gacatgtctg 240
aagattatga aaagTttcat gaaattcctc cttcaatgt caaggctgac ccaagcatcc 300
tgataaacia tgaagattat ccatggTtac ggcgcaataa gcaaatgaca caagcgaaga 360
aaaagtgaag actttctccc gcaactatta tgatgatacc atgccaactt tgtaacagat 420
gatctt 426

<210> 4026

<211> 429

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-048-Q1-E2-F4

<400> 4026

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gtgacccggc ggtggtggca catactgagg cgggtcatga ttttgtcgag gcgggtctgc 120
 agcatgtggc tgatccggca ctctgtccc aggtgtttca cccagttta ctgctgccag 180
 attactgggt cctgctcctg gcgtgctgaa gagatttctt gcctcataaa ccgtcggtag 240
 acgagattgg tgccttctcc tcataacgtc gtttgaagcg ttctgatcca acatgagccg 300
 gtaattttct gcttgaatct gctaccctga gcatccanag cggcctactc ctcanccatc 360
 ctggtttctc cagcagccat ctctcatta gctgagcta tctgatctcg caatttctg 420
 acctctaca 429

<210> 4027
 <211> 402
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-G1
 <400> 4027

aagggcgagg cgcagatctg ccgagccgag gaggagaagg ggaggaaggg tggggagggg 60
 gagaggggaag aggagccatg cagagttggt gttggaggag gtcccccttg cttcttacag 120
 gacagcaaatt cgcattcaag aagttggagg aggtgtatgg cacctttgat gcgccttcac 180
 agaggaatgg cttctttctg ccaaggccca agatgaccaa cgctgacctt ggcaggatca 240
 tcaactctga tgaggtgcag tctgtcgta agccaaccaa caaggagata aagctcagga 300
 agaagaggag gaacccgctc aagaatgtgg ctgcagtgtc caagctgaac ccctactttg 360
 gcactgcccc caagatggct accctcgtgg aagctgctcg ca 402

<210> 4028
 <211> 430
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-048-Q1-E2-G10
 <400> 4028

ggtcgacggg gagtcttatg tggactaagt tgacaaagcc cttcgtacat gtcaacctag 60
 tagaccacaa agtcagcctc caaatctgtc ccaaacagca cacaaccgga aatttctggc 120

cagattcaaa ttaactttaaa aactaaacat accttaattt aaatccaatg aaattttacc 180
 cgcacaaaaa caatgaaatt taaaatatca aaatccgaaa gaaaaaaagt attttggaac 240
 aaatgtcatg tttgctatat ttttcatttt acaaccatt tattattact tatagcccat 300
 ttcttattac ttatagccca ttttctggga aaaatgcac nctcctcgtc ttgaaagatt 360
 tccggcccag cagggcatag aaaagcaagt aagcctacgt tggttattct gcanaaaaat 420
 agctgggcta 430

<210> 4029
 <211> 322
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-G12
 <400> 4029

ggcgactac caaggtattc tggcctgtct ggatggttac atgaacatcg caatggagca 60
 aactgaagag tacgtgaacg gccaaactgaa gaacaagtat ggagatgctt tcataagagg 120
 caacaacgtc ctctacatca gcacgtcgaa gcggtcctc accgacggag cataggcgga 180
 gtggagcatt cacatcatca tgtaatttga aggtcggttaa cccgattatt ggttgtggtg 240
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 <223> unsure at all n locations
 <223> Clone ID: LIB103-048-Q1-E2-G2
 <400> 4030

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 ttatttccgg tctctccata tgtggctcac atgcatttcg aacctaaagt aggaacattt 180
 agctaaccaa ttaaactct ctacgtttta ctaatattag atatgaattt gtacaactaa 240
 gcttggttag ctcatgggt ggagtagtgc tattacgaca cgaaccacgt aggctgattg 300

tggatcatcat aaaattggga aaacataagc atgatgggta cagtgttaac catggcagtg 360
 ggatggcaga tctgaagctg caaaccgcgc aaagggtagt tagcanccga tgttttcttt 420
 gaaataacaa c 431

<210> 4031
 <211> 432
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-G4
 <400> 4031

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 ggccctgaga gtagacatcc tgggtgtccc tacattgttt ttccctggtaa tgttggtgat 180
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 gaacttctcc ttaacgcgga gaagagtggc tatgcagttg gtgctttcaa tgtatataat 300
 cttgagggaa ttgaagctgt aattgcagct gccgaggtg aagaaagtcc tgctatcctg 360
 caggttcatc ccagttccct gaagcaaggt ggagttccgt tggtagcatg ctgcattgct 420
 gcagcagaac ga 432

<210> 4032
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 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-G5
 <400> 4032

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 aataagataa taaaattata tacaaatgga taaacaaata tggtaacttc tctaattgta 120
 ggcagcattc tcgtctcgag cttatttttt acatggctgc gaattggagg atcttctgtt 180
 gtgt 184

<210> 4033
 <211> 451

<212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-G8
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ccgacatcgg catctcctcc aaggccatgt ccatcatgaa ctcttcatc aacgacatct 180
tcgagaagct cgccggcgag gccgccaagc tggcgcggtg caacaagaag ccaaccatca 240
cgtcccgga gatccagacc tccgtccgcc tcgtcctccc cggcgagctc gccaagcacg 300
ccgtctccga gggcaccaag gctgtcacca agttcacctc ctcttaggct gttcgtcttc 360
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accgcgatgt ttctgtatct cgagaaatgg t 451
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<210> 4034
 <211> 364
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-H10
 <400> 4034

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cctcgccggc aaggcgga aacttggaag ttcaacaaga aaccacccat caggtccagg 180
gaaatccaga cctccgtccg cctcgtcctc cccggcgagc tcgccaagca cgccgtctcc 240
gaaggcacca aggccgtcac caagttcacc agcaactagg gttccgtcgc ggtgtctcta 300
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<210> 4035
 <211> 291
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-H11

<400> 4035

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actgtggcca ggtaggggat gaagtccagt atcacatcca gtgaaatcta gagctccttg 180
cgctcgtcc tccgggcgga cctcgccaag cagccgtct cggacggcat cacagccgtc 240
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<210> 4036

<211> 419

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-H12

<400> 4036

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gaaattgttg atctctcatg cttcacttat attattttga gagtcttcta gaacagcatg 180
atatttgcta tggttataaa attggtccta gaatgacggg catccaagtt ggggtataata 240
aaaactatca tagaaagtga attggatgct atgatcaatt tgatgcttga taattgtttt 300
gagatatgag gatggtaata ttagagtcac gctagtagag taattatgaa ttttaaggaat 360
acttgtgttg aagtttgtga ttctcatagc atgcacgtat ggtgaactgc tttgcatg 419

<210> 4037

<211> 441

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-048-Q1-E2-H4

<400> 4037

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tggtaggttt gatcgtgaga ttgacattgg agtccctgat gaagttggcc gccttgaagt 180
tctcaggatt cacgcaaaaa acatgaagtt agctgaagat gttgaactgg aacacatttc 240

togagacacc catgggtatg ttggtgctga tcttgctgct ctttgtactg aggctgctct 300
 tcagtgcatt cgtgagaaga tggatattat aggtcttgag gatgagacca tagatgctga 360
 gatactgaat tctatggctg tgacaaacga ccatttcaag actgcactaa cgacaagcaa 420
 cccatctgct ctccgtgaaa c 441

<210> 4038
 <211> 422
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-H6
 <400> 4038

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 agaagcctgt tcgtgaactt gttcaagatg atgaatggct aaacggggag ctcatgcca 180
 ctgtccagca gcgtgggtgct gcaatcatca aagcgaggaa gctctccagt gctctctctg 240
 ctgccagctc agcttgtgat cacatccgtg actgggttct gggaaccgcc gaggggaacat 300
 ttgtttccat ggggtgtgtac tctgatggtt catacgggtg gcctgctggg cttatctact 360
 ccttcccagt aacgtgcagt ggtggtgaat ggacaattgt tcaagggctc ccgatcgatg 420
 ag 422

<210> 4039
 <211> 348
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-048-Q1-E2-H8
 <400> 4039

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 tgtcaaggat gtccgctttg accatcgaca tcttttaggaa actagcaggg gcagcgtctg 180
 ttcggttcgc tgagttggaa ttggtcaaca tcaactcggg cgaggtttat tcatgctct 240
 tttccgactc acacggcgag ctgcgcaagc acgcgctctc cgacggcagc actgcagtat 300

ccaagttttac ctcacgtac gtttcatctc acatcccttc tatgatgt

348

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<212> DNA

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<400> 4040

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agggctaata aactttcaca ataagtatgt gaattcttta tgactactat gaggccatgg 120

attatacgca ctctcatctt tctgccattt gctagcctct ccagtaccgt gcattaccct 180

ttctcacctc gagagttggg gcaaacttct ccgatgcac gaaaccccat gatatgatat 240

gctctatcac acataagcct ccttatatct tctcaaaac aaccaccata cctacctatc 300

atgggtatttc catagccatt ttgagatata ttgccatgca acttcaacca ctccgttttt 360

atgacataca cattcaatgt catatttgct tgcacgatca tatagtggac atagtatttg 420

tgggtcagcn nacatccatc attatcatac 450

<210> 4041

<211> 69

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-A2

<400> 4041

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acagcaacc 69

<210> 4042

<211> 351

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-A3

<400> 4042

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gtccaaggag gccggcggca agggcaaaac ccggggccgc aaaaagggca ccaaggcaaa 120
aaagggttg gaaacgtaca agatctacat cttcaaggtg ctgaagcagg tgcaccctga 180
catcggtatc tcctccaagg ccatgtccat catgaactcc ttcataacg acatcttga 240
gaagctcgcc ggggagtcg ccaagctggc ccgctacaac aagaagccca ccatcacctc 300
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<210> 4043
<211> 394
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
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<400> 4043

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aggtgaaatg ataagaataa ctccgtgggg gaaaaaattc acacggcggg ggcccaaaga 180
tatttcacca cgctggatgc actaagtgga gctatcggtt gtgcctagaa cttcttgagg 240
ctttctatgt tccattttct ggatgcatgc gagtttgact agtgggtgat tgactccact 300
tctaacggca acatcacaat agttttctag atgcatccga taatttatga ctttaatttat 360
gacttaaaac aacaacttca gattgagata atga 394

<210> 4044
<211> 377
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-049-Q1-E1-A5
<400> 4044

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ccctctcaag aggcggggga ccagcagcgt catagcggtc gcagcgccat acgtccgctg 120
acccaagatc aagctgggtg ttacgtggc gttcaagacc agcatgcacg gcagcatgct 180
ggctccagcg aggtacggtc gccgggatgg gacgctgctc cttctaactt ggtaggaggt 240

ccaagcacgc cctctcctc gcaccgttca cctctaccgc gcaccacccc agcagaagcc 300
 ttggcgcggg cccagctgct cctggactat cctcctacgg tggacaagac cgacgaatgg 360
 agggccacta tccagag 377

<210> 4045
 <211> 370
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-A6
 <400> 4045

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 ggccgcccgc ggcgctgtcg tgctcgttgc ctagggttct gtccgact gtgccttgag 180
 atctattata tctttactat tagttgttcc cgtaccagc aatttgtgtt gaacaagaca 240
 tcgttagttt gttatccttg ttctgtgtg gtaaaccaac atcttatgag aattttgcga 300
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<210> 4046
 <211> 421
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
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 cgatcacatt atatccgctg gttgatgagc aacatgactc tccgcccctc ctcctccag 180
 gaagagacat gatcatatcg atcaccagtc atggagtcaa gtggttggtg tcgtcaagct 240
 aaatgttggt gagtgccaaa tgagaagata tatgttctaa tattcctgag ctggacatta 300
 tggtaaaata ttaattttag aaattttgcc aatcataccg gtctgtagct atatcacatt 360

gcaaaattcc atgaacatgt ggtccacatt atttttcaca ttgcanaatt ccatgaacat 420

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<210> 4047

<211> 399

<212> DNA

<213> Triticum aestivum

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<400> 4047

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tcgcggccct gggatatctt atccatgacc tctcttcac cgtgtttggg ccaacgtgta 180

tatccatcca tgaatccccg agagactaag ttccactgga catctgcaac ttgatgtgac 240

tctatattgg cacaattagt acatggacac atgatgtaat ccgcatcacc aattatccac 300

tttgtacttt cagtcaaatt catgaactct gtcacgccat tgatataatc tgcgggtttc 360

cgattcttca tccatcgaga ttgttccatc tgcaccaca 399

<210> 4048

<211> 275

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-B11

<400> 4048

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cttttttaag cagtagagat ataccgatgt atgcctgtct gatcttgtaa cttctaatta 180

caaataaaat tgaaatctgg aagtacctta aaatacttaa cctctcaatt tcttccatgc 240

ttacttaggc cccgttcgga ttccctccaa ttccc 275

<210> 4049

<211> 407

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-B2

<400> 4049

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tattcctctgt ggggtatagaa cccatgggat gggttaacaa caagaggcag tagataaggt 180
ttacacaggg gcttaatcta aaaagaaacc tattgcacgg ggccctgctg cacgtctacg 240
cctttgtctc ttttgtgccg tattcctggaa ggggtatcgt cgaatgttgt ctgtaaaaaa 300
gaaaaactcg taagaggggtg caacgtaagt atgcgttcaa taataagagt gtaagttgtt 360
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<210> 4050

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-B3

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cgcttttgaa cagggttttg gtaggacagt tatatgccga gacctggaaa ctgcgaccag 180
agttgcacgc agcaatagtc tagattgcat cacacttgat ggtgatcaag tagccaaaaa 240
gggtggcatg acaggagggt tctatgattc tagacgctca agactgaagt ttgtaaaagt 300
aatcagggac aacaaagcag aaattgaaaa aaagacggca catctagaga acgtgggaaa 360
aaagttaaaa gatatagata agaaaattac ggatttgatt accaaacatc agcaaat 417

<210> 4051

<211> 411

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-B9

<400> 4051

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gggcgactaa acctccgaag tctatctgaa aaagcaagcc gttgttgaac tttgagtttt 120
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agatcagact agtagtacct gcctggcaat atggttgtct ttgatgaaaa aaaaaaaaaa 300
aaaaaaaaaa aaaaaaaaaa taaaaaaaaa aaaaaataa agaaacataa aaaaaataa 360
gggaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaacggcccc cccaaagggt t 411

<210> 4052
<211> 326
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-C1

<400> 4052

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atgactgggtg tgaagatttg cttggtcggt ctgagaacta tccaagtatc tagtactgtg 180
ttttaagttc ctactagcaa gatgcccggtg cggtgcacga aacatcaaga tgcatttgta 240
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cttgggtctg aactctgggtg taaaaa 326

<210> 4053
<211> 394
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-C2

<400> 4053

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ctcctagttt agtccgcac attactttga tgtttgcaat tgcgtcatg atctatttac 240
tgctgattcg gattaaatct cataactaaat tgctcatata ttcaactatc caatccaaaa 300

acctgattac aggcaattta ctccgagtgg ttttgctgcg cttttgaagc cgctacttt 360
taagggggtg caatataaaa tgtggcgac aaga 394

<210> 4054
<211> 381
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-C3

<400> 4054

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ttccacatct aggaagagaa agcacatcga ttcttcactt gacctttcga ccaaggaaca 180
tttagctatc aggaatgggc aactatctca gggtatttat cagaagaacg caatggcctc 240
cgatggttca cttccaatag gccagtctgc gcaccccat atgatggggc cctttaaagt 300
cacctacagg cctcttttag cggatattat tcagccagg gatgtaaagg agctttgtaa 360
acttttgggtg acagtatcgg g 381

<210> 4055
<211> 383
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-C4

<400> 4055

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ggatgtcacc gagctgatcg ggaacacggc gctggtgtac ctcaacaagg tgaccgacgg 120
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caggattgga tacagcatga tcaccgacgc ggaggagaag gggttcatcg tcccaggcaa 240
gagtgtcctg attgagccaa ccagtggcaa cacaggcatt gggctggcct tcattggctgc 300
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catcttgaag gcttttgggtg ctg 383

<210> 4056

<211> 325
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-049-Q1-E1-C5

 <400> 4056

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 aactcgataa cttatatgtt ctctaaacca ccgaacactt cactagtgtg actgggtcaca 180
 tccactaagg tgattataac cacactcaga tccgatctgt tgggtgtttct gtagcacgcc 240
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 cgatatcatt catcgaacgg atatc 325

<210> 4057
 <211> 389
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-049-Q1-E1-C7

 <400> 4057

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 tcaaagccat tatagagagg ctgatacaga gggaaggcca tcttgtagtc atagacgaag 180
 gaacagcggc agcagaaggt gctgcagcaa gggcatcgga gcacagaatc ctggctgtta 240
 acccgaacta cgtcattgat tgattaacca gctgaggaca cagctaacta gatccatcat 300
 atgtggttga ccaatagagc agacattcaa acggaagaca tcctgttggtc atatgctcta 360
 gaaatgatat gttgtacctg ccatcccct 389

<210> 4058
 <211> 387
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
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 <400> 4058

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ggccttctgg ccagggtgga ttggtagaca aggacgtcat gtcgcacgca caactgggtca 180
gcgacacctt ctcatcgctgc ccggcacgac cgatgggtga ctccaggctg aagccgacca 240
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ccggctcggt cgtgtacacc accaagagcg ccttcnact catgtgggtg tccactatgt 360
gatacggtgt gaactgccac ccgttgt 387

<210> 4059
<211> 388
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-049-Q1-E1-D2
<400> 4059

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attaattaca ttaattgctt gatttccaaa ttgattgggt gtttggtttc caaattgttt 120
tgcattaatg actggtgatg cttttaataa ttaacgtgat cctcctgttt aagtatcagt 180
aatattttta ataattaatg tgatactcag gtccaaagca aataatactc ttcgtaatta 240
gcatgggcct ttggttaaac actcgatgat acttttatac ttccttcgtt cctaaatata 300
agctttctgt agatttcact atggactata tacggttata tatatagacg tagtttagag 360
tgtagataca ctcatTTTgc tctgtatg 388

<210> 4060
<211> 412
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-049-Q1-E1-D3
<400> 4060

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cgtttgggta agaagtataa cggaagaaa ctatatgctt gtttgttttag gaagtgttgc 120

[illegible]

<223> Clone ID: LIB103-049-01-E1-D4

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aagttaagga	gaaggtgcga	tgcgatgagt	gtacaacctc	tttggtggcg	ccga	180
ctcggttcg	tctgaggtgt	cggttaaggat	gctgcggttc	cgatggagca	ggttca	240
gcgctatggg	gatggagcag	ccgcgataga	cgaggcgatc	gtcggagcag	ctccttggac	300
gtggaggacg	gggctgctga	accggtggga	tggcgagatg	gacgacggat	cctcatccgg	360
ggaggt						366

<223> Clone ID: LIB103-049-01-E1-D8

1815

ctctccgtga gaatacaaga tcctgtaggt gtgagtgtcc agcaatgatt aggctgttga 360
gggcatcaga taatgggtat ccagatttac acct 394

<210> 4063
<211> 400
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-049-Q1-E1-E3

<400> 4063

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ggagggccaa agtaaaaaaa agatagatca gggaggggggt caaaatccct agcactgttc 120
cattcccaaa tcgagcctgg catcttcac tcctcacc tccttctata ccttcggcca 180
ccgccatggc caggccgga tgggtggtgc ccccgtagc catccatcca ctcatttcca 240
tccaccactc caccatcacc ctacaccacc agcaccacca ccatcattcc gcgccatcca 300
tccaccatct ccagccaccg acgcatctgg cgcgaccgac caaacagccc gtctggtgtc 360
ncgcgtgagc gcgccatcca ccatcctct gctctctgcc 400

<210> 4064
<211> 390
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-E4

<400> 4064

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ttttgctggc tccgccgccc cctccggcca gcgtcgctgc cccatggggc tgccgaagca 120
tttcaccgtc gagtaccca gcttcaagct cgtgatcgtc ggcgatggcg ggactgggaa 180
gaccactttt gtgcagaggc atctcactgg acagtttgag acgaaatatg agccactat 240
tgggtgtgaa gttcaccat tggatttcac cactaactgt ggtaagatcc gtttctactg 300
ctgggacact gctgggcaag agaagtttgg tggccttagg gatggatact atgtccatgg 360
tcagtgtgcg ataatcatgt atgatgtcac 390

<210> 4065
 <211> 390
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-E7

<400> 4065

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 gtatgttgag cagcagaatg cccaaggcgc atatatgttct acagaagagg tgaaggagga 120
 agtaaagtgc atcaaggcca ttatagagag gttgatacag agggaaggcc atcttgtagt 180
 catagatgaa ggaacagcgg cagcagaagg tgctacggca agggcatcgg agcacagaat 240
 cctggctgtt aacccaaact acgtcattga ttgattaacc agctgaggtc acacagctaa 300
 ctagatccat catatgtggt tgaccaatat agcagacatt caaacggaag acatcctgtt 360
 gtcatgctct aaaaatgata tgttgcacct 390

<210> 4066
 <211> 381
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-F1

<400> 4066

gggtcgaccg gataggaggt tcttctgaaa atgacaaggc gtacgggtgga tgggaatctg 60
 ttgctgggct tagtgatgtt attcagagca tgaaagaagt ggtgatactg cctcttctat 120
 atcctgaatt ctttagctct ttaggtctta caccaccaag aggtgttctg ctgcatggtc 180
 atcctgggtac tggtaaaaca cttgtcgtac gggcactaat aggggcatgc tctcagggta 240
 acagaaggat tgcttatttt gctcgaaaag gtgctgattg tttgggcaag tatgttgggg 300
 atgctgagag gcagttaaga cttctattcc aggtagctga aaaatgcaa cttctatca 360
 tattttttga tgagatggat g 381

<210> 4067
 <211> 419
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-F8

<400> 4067

attcgccggt cgacttccac caaaacgata tccatcatct catcgaaaga cgggacacct 60
 tggcctctat caagtgggtat cagatttcca ggttgctcgg tgagatttta cagtttttcg 120
 tagtttagat cgagtctgtt ctccatacct acagtccacg aaaaagccaa aaaaaattag 180
 ggtagttca tcatatccga accagtctga gccattgcat aatcttttta gggttttgct 240
 ttgttgaatt tgtggttgca tcgtcgtgct tagttgctgg tctcagagtc tagtatttta 300
 gagtttcgag ttctgggtcat aagttgtcac gccgccgctg caccatcatc atcgccctcg 360
 ccatctacca ccaccgctta tccgccaccg ctccgaatcc gtatccatat tccaacaac 419

<210> 4068

<211> 316

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-G1

<400> 4068

cgctctggca ggacaccctc acaaacggca ccctgtagat gctcgatcct tcaatctctg 60
 gtggatgctc catctgggat cgatactccc accaccgctc cctcagatc ggattcgggtg 120
 aatctgtttg ctccagggcc cagaggagaa gctctatgta ctccggcgcg actccctccg 180
 ggagtatcgc cgccttttcg ctctgttcaa gacatttggc catggatgct gccgtcgccg 240
 ctagttggtc cttgttgta aaccaagact gtatctccaa gatcctagct ttcttcaactg 300
 ggtcgccggt ctgcga 316

<210> 4069

<211> 440

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-G12

<400> 4069

cgacgggtgc caagtagaac caataggatc ttcttgggtg ataattatct gatcttgctg 60
 aaaaagacag aaactttgag ctacgcgcaa taattattaa aattcaccag aacgtgataa 120
 attgccaaatt ctttttgcag tagatcaata taaaattttt acaggtttta gaagtttttc 180

agaatttttg gaattccata agtattcgaa caaatcagat tgctacagac tgttctgttt 240
 ttctgtgttt gtttgcttat tttaatgaat ctatgggggg tatgaaccat agagaagttg 300
 gaatacagta gatttaacac caatataaat aaagaatgag ttcattacaa tactttattg 360
 tgggtggtttg ttttatttgg ctaacggagc tcatgagatt ttctgttgag ttttgtgttg 420
 tgaagttttc aagtttttgg 440

<210> 4070
 <211> 396
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-G3
 <400> 4070

cgggtcgacc ggtccgattt acaatattag ttttcgatct actattttgc aatcttttac 60
 tttccgatct ataaacaaaa aatacaaaa atatttactt tatcgtttat ctatctttgt 120
 cagatctcac ttttgcaagt aactgtgaag ggattgacaa cccctttatt gcgttgggtg 180
 caagttgttt gattgtttgt acaggtattc ggtgatttgt gcgttctctc ctactagatt 240
 gataccttgg ttctcaaact gagggaaata cttatttgta ctttgctgca ccaccatttc 300
 ctcttcaagg gaaaaaccaa cgcaagctca agaagtagca ccatccttct tatccatcaa 360
 gtatttgggg cagttccgct tccagcgacc attccc 396

<210> 4071
 <211> 403
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-G4
 <400> 4071

cggggtcgac cggatttggg aaaattacac ttactgattt cagtcttgga gaacttccac 60
 catatttgcg tacgatgaga gtcgtcccaa gggatctaaa tgaactgtgg gctttcgaat 120
 ttgattttga atattgtagt aaaataatac tgaatgctga agcaagactt gaggttcagg 180
 aaccagggct gcaaaaagac ataatgagaa ctactgtcga agcagattct aatggcaacc 240
 aatttggacc ttcgcaactt ttggcttctg taatggaaga tgaagatgag gcagatgtgt 300

taaggcggtc aaagaaaact gggaagacat caaggtggaa aaatatcttg cattcaatca 360
ctgaccatgt ctctcaagtg ccgttttcgt tggcaattaa agt 403

<210> 4072
<211> 286
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-H10

<400> 4072

cgccggtcga cggggctagc caccggatcc atccatccgc ccctcgctgc cgctgcgtct 60
cgtctccacc accccacttg cccccggact caggaggatc gtcggagatg tcggacaccg 120
atgagcacca ctctgagtcc aaggccgact ccggcgccctc caagacctac ccgcagcagg 180
ctggcgccat ccgcaagggt ggacacatcg tcatcaaggc ccgtccctgc aaagttgttg 240
aggtctccac ctccaagact gggaaacatg gtcacgcaaa gtgtca 286

<210> 4073
<211> 397
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-H12

<400> 4073

acatgttgct gtttgaaaac agaaagtta ccgctgttgc aaaaattccc tagaaaagtc 60
agagagtggc ataagtgtga atatttttgc atattgacct cgaaaaaatt aataacattg 120
gaaatttaag tcaaaaattt tggaatcaag gaagtaatga tactcctgga atccttataa 180
actgtgccgg tttgacacaa tgccggttaag tttgcaatgt gtgcacaacc ttgcctgcct 240
aatgagttta attgaggata ggagtattaa atatacagag gcatttagta tgcaatgttg 300
aataataatt tttgtgagtt gttatagtag aaaatgataa ggttttgcac tgggttatac 360
taacctatct cagagttct tattgagttt gttgtga 397

<210> 4074
<211> 398
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-049-Q1-E1-H2

<400> 4074

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agatctcggg taaggggtcc caagatgtgt gtctaaggat cgatgggtcac aatggacaat 120
ggggacacga tgtttaccca ggttcggggc ctcttaatgg aggtaaaacc ctacgtcncg 180
cttgattgta ctcgatgagt attgggggtta gaagagttga tctacctcga gatcgtaatg 240
gctaaaccct agctgtctag cctatgatta atctgatagc ctctacagac taaaccccca 300
ggtttatata cacaccggag gggcctaagg ttgtacagag ttggtttgca gaggaaggaa 360
ataacacatc ggaaaccaa cttgccaacc acgcatat 398

<210> 4075
<211> 386
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-H3

<400> 4075

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cccaccagct ccaggccagt atccaggcca tatgtactca gctccaccac agcagtacac 120
ggcgacatca gggggcttct ccgcccctcc gccaccgccg cctcatgaga tgcaccttc 180
acaccagatg ccacctgctc atcatggaaa tgagatgcat ccttcacacc agatgccacc 240
tgctcatcat ggaaatgaga tgcaccttc acaccagatg ccacctgctc atcatggaaa 300
tcagcagaga ccggcaagtg gtgcccctgg aactggccaa ccacctcgt attaccacca 360
ttaagtgtgt gtgtaccttc gccgcc 386

<210> 4076
<211> 449
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-049-Q1-E1-H6

<400> 4076

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 agttgactac gatgagacct tctcaccagt agtgatgctt aagtcctgtt gaatcatggt 120
 agcaattgcc gcattttaga ttataaaatt ttgcaaatgg atgtaaagac tgcattcctg 180
 aattgatttc tagaagaaga gttgtatatg atgcaacctg aaaattttat cgatacaaag 240
 gatgctaaca aagtgtgcaa gctccagcga tccatttacg aactgggtgca agcatctcgg 300
 agttggaata aacgttttga tagtgtgatc aaagcatatg gttttataca gacttttga 360
 gaagcctgta ttacaagaa agtgagtggg agctctgtag caattctaatt attatatgta 420
 gatgacatat tgttgattgg aaatgatat 449

<210> 4077
 <211> 340
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-H7
 <400> 4077

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 cacgttcacg ggtttgacta caaggagacc ttcgcaatac taatgatgct taagtcggtc 120
 ggaatcatgt tagcaattgc cgcattctag attataagat tttgcagatg gaagtaaaga 180
 ctgcattcct gaattgattt cgagtccaag acttgtagat gatgcaacct gacactttta 240
 tctatacaaa ggatgctaac agagtgtgca ggctccaccg atccatttac gagccgggtg 300
 acatcatctc ggtgttggtg tacacgttct gacaatgtga 340

<210> 4078
 <211> 336
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-049-Q1-E1-H8
 <400> 4078

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 gtaagcgtgt ttaacctgac agcgctgta attgtaggcc ctttccgcat acttcacagc 120
 ttgttgtctt atgaggtgct gcagggcagc aggctgggtt atgccgcctc ggtcattatt 180

atcatttgta acttggttaga gtgcacatta atctcaggag gacatagaca taatacttat 240
gctgctgttg ttgtaaaaaa aacaaaaaaa acaattaaaa acaaaaaaaa aaaacataaa 300
aaaaaaaatc aaaattataa caaaaaaatt aataac 336

<210> 4079
<211> 134
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-A3
<400> 4079

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gatggtgaag gtaccacgag tgccatcctc cttagcggac accttctttg tcacaggtgg 120
atctgccatc gcct 134

<210> 4080
<211> 376
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-B2
<400> 4080

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tcatgcacca gagggacgaa gtggagtaca agagggagcg ccatgtgatt gtccgcaagg 120
cttgagctga actgaaccga tggagctacc atggaaccct ctggccatct gatgtgtgtg 180
tataagtagt gctgacactg cagcccgttt cctgaggaaa tttgttgggt cgttgaaatt 240
gagttgtagt tgtactactt tgagctgtag ctgtagccct aaatcatatt gtgtcgaact 300
gaagatgtac ccagtaagt tcattcatga atgcaacatt ttggcgttct gcagctgagc 360
agagtcaatg cctagg 376

<210> 4081
<211> 401
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-B3

<400> 4081

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caacctaagg cttcaaataa ccaaatttat tacaatcatt gtaaggacct caatggtggt 120

aatttccttc gctagacgcc atactctcct aagtgtgaa accaaggcta tgatcaccaa 180

agctatggaa atcaaggcaa atagagacca caactctgat accacttgta ggatcgaaag 240

taggtctaga gggggggggg gtgattagac tacttgacca aataaaaatc tagccttttc 300

ccagctttaa gtcacagtct ttaacaactt agcacaagtc aagcaataaa cctacacatg 360

caattctaag agtatagcag cggaatataa atcattgcac a 401

<210> 4082

<211> 302

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-B7

<400> 4082

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atacctcaat gcgccaccgt actcccatcg ctgatctatc catctctcta ctcatccata 120

cctgttggtta ttctccgggg acagtagttc aaccactaag cctcgtact cctccacatg 180

ggaaacaact actgggtctt cactggatcc atgtcgttcg cttcctaagc ctgcgctcgt 240

ccatctcact ggtgatctcg gtgtggtctg tccaacatgt tcaatgagcg acatccatcg 300

ga 302

<210> 4083

<211> 417

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-C1

<400> 4083

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atgtattgcg ccggcgatgt gcacacgcgg ccaagggcca cgggaatggc gggaaggcaa 180

cgagggggat gcgggcgagg cgcggggaact cacggagacg agggccgctc gcggacgaga 240
 gggagaaggg gacaagagcg aggaagacga cgggtgcacgg gcgtgcactg tgctcggcga 300
 cggcgatggc tcaacgagga agcaaacgaa ggggaaacgg gccaaaggcg acggcgacga 360
 tgaggctgag ctggttgata agcttggacg agccagagcc agccgaagat gcgctac 417

<210> 4084
 <211> 457
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-C3
 <400> 4084

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 aaccocctgaa atcaggcctc ttgacatggc aaagcgccct cgtcgcaacc gcaggtcgcc 120
 agctottagg gctgcattca aggagacaac aatctcgccc gctaatttgg tgctcccatt 180
 gttcatccac gaaggggaag aggatgctcc aattggcgcc atgcnCGGGT gctttaggct 240
 tggatggcag catgggcttc ttgatgaggt gtataaggca cgcgatgttg gtgttaacag 300
 ctttgtgctc tttccaaagg ttccggatgc attgaggtct ccaacaggag ttgaagcata 360
 caatgacaat ggtttggttc cacgaacaat tcgctgctc agggatangt tccctgatat 420
 tattgtttac acggatgttg ctttggaccc gtattca 457

<210> 4085
 <211> 196
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-C6
 <400> 4085

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 agaagaagaa gaagaagaag cagaagacga agcacaagaa gaagaagaag aagacgaaga 120
 tgcagctgat gcagaagatt tcgatgacgt cgacgacgat gactaagctg tcgaagactt 180
 cgaagactcc tacgaa 196

<210> 4086
 <211> 433
 <212> DNA
 <213> Triticum aestivum

<223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-D3

<400> 4086

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 cagatthttga ttctcgctta tacgggtttg atattggcac ctgtcttgag gtgattgagc 180
 atgtggagga ggaccaagca agtttatttg gcaacgttgt attgagttca ttctgtccgg 240
 cggtgctcat tgtttccaca cccaactacg aatacaatcc taccctccag aggtcagctt 300
 tgccaaacaa ggaagaggag caggaacaag acgctggacc ttgcaagttc cgcaaccatg 360
 accacaagtt cgaatggacg aagtcncagt tccagcgctg ggctactcgc ctcgctgcaa 420
 gccacaacta cag 433

<210> 4087
 <211> 427
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-050-Q1-E1-D4

<400> 4087

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 atctggattc cttcgccaag gcaattgcac tagtattgtc acaaaagatt ttcattggac 180
 ctgatgcact aggtattaca cctagatcgg atatgaactc catcatccag actccttcat 240
 ttgtgcttt tgaagtagct aagtactccg cttcacacgt agatccctcc atgatgctct 300
 tcttcgaacc gcaccaactg acagctccac cattcaatat aaatacgtat ccagtttgtg 360
 acttagagtc atccggatca gtgtcaaagc ttgcatcaac gtaaccattt acgacaagct 420
 ccttgctc 427

<210> 4088

<211> 430
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-050-Q1-E1-E3

 <400> 4088

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 ggcatgcagt tgagaccaac atactgagtg cagcagacag atatggtgta ctgcatgaca 120
 cctatgccct ctgtatggct ggtaaacaga agctggtcac gttgctgcat ttgattgctg 180
 cgtacaagaa tgagactgag tatactgtgc ttgcacatgc catcaacaca agcctgagca 240
 tatatgagat gatggctggt gctgcacccg aggagttggt taatatgaag aagttcctaa 300
 ttgacttcct tgagccattc gcacagagag ttggctggga tgccaagagt ggggagggtc 360
 acctgaatgc actgttaaga ggtaccctct tatctgctct tgcggaacta ggccatcagt 420
 ctaccataga 430

<210> 4089
 <211> 98
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-050-Q1-E1-F10

 <400> 4089

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 gactaaacat tgtaattcac ggccaacgag atccactc 98

<210> 4090
 <211> 407
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-050-Q1-E1-F2

 <400> 4090

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 gaaggtagat tccgcgtccg cactcggttt gggggctcga cgcgcgtgcy accggcttct 120
 gccgtgacag ccaccatgca cgctcctcc gcgcgggcyg agacgacaat gacacgcttc 180

ctcctcaccg gcgtgctaga gcacacgctc gtctctctct tcatacgctg catgcataga 240
cgcggtcca ccagttgctc gcgtgcttgg cagcgcggcg acattgcgag gagggactgc 300
agacgacatg agcgggagag ccttcagctt catggcacat ggatggcggc gacatggcgg 360
tgatgggcga gaaattgtag gccggagcag gcgggcgcgc gcatgcg 407

<210> 4091
<211> 111
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-F3
<400> 4091

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aaccggettc tggcgtggta tgcaccatgc acgccttctc cgcgctgggtg g 111

<210> 4092
<211> 327
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-F8
<400> 4092

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gaccggccac cgccgtctcg caccttctcc tcaacgaaa cgaaccagag cacgcctgga 120
agcggagtaa atccacgtcc gtcgctctac tggatgtgga ttgggtcccg tgaatcatcg 180
tactcagtt gatccggaat ggagctcaaa actgagctca aaatgtcagg aacggtgcgg 240
ccgtgcagag gccgggtcac catagggcac accggaggca atggcgcagg tagtaataaa 300
cactcataca tcgcagtcgt ggtcatg 327

<210> 4093
<211> 436
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-050-Q1-E1-G1
<400> 4093

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 ggtatctcgc tagccctttc tgagaccgca aaacgtaaata gcagagcacc tttaaagacc 120
 aaggactgac tagacattgt aattcatggt aaaagagatc cagtcaagtc atactcaatg 180
 taaactaaca gtaatgaatg caaatgacag cgggtgctctc caactgggtgc tttttaataa 240
 gatgatgatg actcaacata aaagtaaata gataggccct tcgcagaggg aagcagggat 300
 ttgtagaggt gccagagctc ggttttgaaa cagagggtgaa taatatatttg agcgggtatac 360
 tttcattgtc aacataacaa ccaagagatg gcgatatctt ccatgctaca cacattatag 420
 gcggttccca aacaga 436

<210> 4094
 <211> 431
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-G2
 <400> 4094

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 cgcagccatg aattacatca tcgggcgcctt caagccgccc tgcgacatct tcgtgacctt 180
 ttccgatgag aggagccgga agcagggttc agtcaagaag gataatggga agacaaccat 240
 ggtgcgggag ttccagagcc tggagaccat agccggagag gtatcaatag cgctgttcc 300
 tggtaaaagg attgagcaca tgggtgttaa gattgagctg cttggacaga tagagttgta 360
 tttcgacaga ggcaacttct atgacttcac ttactgggtg cgtgagttag atgttctctg 420
 tgaaatatat g 431

<210> 4095
 <211> 437
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-G3
 <400> 4095

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gtgaagctgc tcttcgccgg cgaccaactc cgcaagtcaa ccggttccga tgggtgcaaag 120
 cttgtggcta ccaaggcaaa gggcctgcct ctcacacca tttctctcca tagtgttact 180
 ggcgctgtga cgagtgatgt catagccgag ttctcgctag ggctctatgg agcttatagg 240
 actgcacggg agcttgtatc caaagaacaa gaacaaatgt cacagctgat ggggagtctg 300
 tcaactgaaa gagaaaagaa cgaaatcatg caaaaacaac tcgaatctct tcttttctta 360
 gacaaaagaa aggcaacaaa gccaaagctg ttggctgac aggttccaag tgtgtctgct 420
 gtgactctgg gctctga 437

<210> 4096
 <211> 385
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-G8
 <400> 4096

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 acacagcaat gtatttttgt atttttgggt taatagatct gaaaataaat gcaaggaaaa 120
 agtagatcgc aaaggcaaat atatgagaaa gagacctggg ggccataggt ttcactagtg 180
 gcttctctcg agaaaaatag caaatgggtg gtgaacaaat tactattggg caattgatag 240
 aacttcaaat actcatgatg atatccaggc aatgatcatt atataggcat cacgtccaag 300
 attaatagac cgactcctgc ctgcatctac tactgttact ccacacatcg accgctatcc 360
 agcatgcac tagtgtatta agttc 385

<210> 4097
 <211> 401
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-H12
 <400> 4097

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 cccgtgactt ccgcagatgt gatccttggt ggggttgoga caagttcatg agaagagatg 120
 cccttgagcg atcagccagt ctaaagtctg attgtttcac cagccggtgt gatattgtgg 180

tgtgcaagga caacacccca gatgccactg gtcctggcac cggcaccgag gttctcctgc 240
 ccgacataca ccaacatddd agcaacctcc ttcagaataa ggtgggtgct gatgtgacat 300
 tcgaggtcng cggcgagacg ttcgctgcac accggtgtgt gctcgtgcc aggtctgaag 360
 tgttcatggc gcagctcttt gggcacgcta cggccagcgt c 401

<210> 4098
 <211> 338
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-050-Q1-E1-H4
 <400> 4098

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 ataacggcct cccaacctt cgcaatgaag gcttccaatc cgggttaaaa cttcaaccga 120
 accccgaacc ggccccccaa cataaaaagg cgcctaacct aataagagtg gcattcctct 180
 ggctactgta taaaatgttt acagtttgta ggcttgtagt gtgatgtag taaggctgga 240
 agagagtttg attttacaga gccaacattg gtctggtagt tggtagtag tctaggcaca 300
 gaaatgcctg gagctcgttt acttgctgta aatgaact 338

<210> 4099
 <211> 359
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-050-Q1-E1-H6
 <400> 4099

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 aggggatggt ggggtttaac tgcagtaagc cagctttgac tcggtggcta tctaaacta 180
 cgactgcaat gtaactcttt taagggtggc caccagagtc cacatattca ccatatcaat 240
 acaccactat ggatccgctc ccgtctccct acgagaacgc catccatagc actcacactt 300
 atcttgcgta tttttgagta tccactttca cttgtctatg aactgatata agcaaccca 359

<210> 4100
 <211> 242
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-051-Q1-E1-A1

 <400> 4100

gatgtggacg actacggata tacaagcttc ctagatgact gaaaatgaaa cccttatatc 60
 atgaaacaag cactcactcc tattgtccca tgacagtgtc actgcataga atcctactat 120
 cccacaaggc tcacagtgcc atttgagaat aacctgaggc tggacggatt tagaattcct 180
 cctgcgtctg atgacacggg gaatgcaata aacaccagat acatcaaaac tatgatctgg 240
 aa 242

<210> 4101
 <211> 459
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-051-Q1-E1-A11

 <400> 4101

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 aatattattc tgatcccgtg atcagaatag tgtttatgtg tgtgtgtgtg tatatatata 120
 tatcatgac tttcaaacac aaagagcttg ccataggatt aaatgaaaaa gggaaagggtg 180
 tggatcacct tgactcaagc acaaagtaaa aacataaagt aaaagatagg cccttcgtag 240
 aggggaagcac aggttgtcat gtgcgttttg gggtgatgca caaaatctta atgcaaaaga 300
 acgtcaattt atattgcccc ttgtatgtgg acctttatta tgcagtcctg cgcttttatt 360
 acttccacaa caagatcata caaagcttat tttctctgca ctaataagtc atacatattt 420
 agatagcaat ttttgttgct tgcagcatga caacttact 459

<210> 4102
 <211> 461
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-051-Q1-E1-A2

<400> 4102
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 cgacaagaat ggcaagaaga aggcccaagaa gagcgtggag acgtacaaga tctacatctt 120
 caaggtgctg aagcaggtgc accccgacat cggeatctcc tccaaggcca tgtccatcat 180
 gaactccttc atcaacgaca tcttcgagaa gctcgccggc gaggccgcca agctggcgcg 240
 gtacaacaag aagccaacca tcacgtcccg ggagatccag acctccgtcc gcctcgtcct 300
 ccccgccgag ctgcgaagc acgccgtctc cgagggcacc aaggctgtca ccaagttcac 360
 ctctctttaa gctgttcgtc ttctgtgtc tcgtagttag ctgttcgggt gtgtttgtgg 420
 ccgtgttatc ctgtaagaat cgcaccgcca tgtttctgta t 461

<210> 4103
 <211> 315
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-A3

<400> 4103
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 cttccttatg agtggcggtc ggggacgagc gatggctctt tctaccaat ctatacccct 120
 aggagcatgc gcgtaatact ttgctttgat aacttgtaga tttttgcaat aagtatatga 180
 gttctttatg actaatgttg agtccatgga ttatacgcac ttttcttct tccaccattg 240
 ctagectctc taataccgag cacttttcgc cggatatata caccacccat aaaccttct 300
 caaaacagcc accat 315

<210> 4104
 <211> 456
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-A4

<400> 4104
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 attggttcca aacagcaatc aaaacaaaat aaaatgacgt gacgctccaa gcaaaacaca 120

tatcatgtgg tgaataaaaa tataagctcca agtaaagtta ccgatgaacg aagacgaaag 180
 aggggatgcc ttccggggca tacccaagct taggctcttg gttgtccttg aatattacct 240
 tgggggtgcct tgggaatccc caagcttagg ctcttgccac tccttattcc atagtccatc 300
 gaatctttac ccaaaacttg aaaacttcac aacacaaaac ttaacagaaa actcgtgagc 360
 tccgttagcg aaagaaaaca aaacaccact tcaaggtact gtaatgaact cattgtttaa 420
 ttatattggt gttataccta ctgtattcca acttct 456

<210> 4105
 <211> 434
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-A5
 <400> 4105

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 tagacctttt gacctggacg aggctgtgat taggaggttc ccccgaggc taatggtaaa 120
 ttacctgac gcatcaaata gagagaaaat tttgaaagta attttagcaa aagaagagtt 180
 gggacaagat actgatctgg agtcacttgc taatatgact gatggatatt caggaagtga 240
 cctgaagaat ctatgtgtaa ctgcagcgca ctacccatt cgagaaatcc tagagaagga 300
 aaagaaggag aagaatgttg caaagtcaga aagtaagcct gagcctgcat tgcattggaag 360
 ccaagacgtc cgctcctcta atttggatga cttcaaatct gcccatgagc aagtttgcg 420
 gagcgtgtca tctg 434

<210> 4106
 <211> 368
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-A9
 <400> 4106

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 catgcatcca ggaaaagggtg ccgcctaacc tttgcacctt caaattgtag gattaaaatt 120
 tggaacctga catgaaattg aaaaatacca tgctttaatt aattatagta cataccttgt 180

gcagggcaca taaaatatat ctgatatcgc ttttttatga atacttttat cttttctatc 240
 ctaaaaaaaaa caaaaaactg gagcaaaaaa ggcaatcaat taaaggctga aaaaaaacc 300
 ttacctttcg ggaaaaacaa aggggtaacc aaattttgga aaactogaag attaaaaact 360
 gttttccg 368

<210> 4107
 <211> 365
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-B1
 <400> 4107

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 ttacagtacc taagtgttg ttttattttc tcatactaac ggagcttacg agttttgttt 120
 tgagttttgt gtgggtgaag ttttcaagtt ttgggtaaag attcgatgga ctatggaata 180
 aggagtggaa agagcctaag cttggggatg cccatggaac cccaatgtaa tattcaagga 240
 caaccaagat actaagcttg ggtatgcacc ggatggcatc ccctctttcg tctatgttca 300
 tcgataactt tacttggggc tacattttta ttcaccacat gataagtgtt ttgcttgagg 360
 catca 365

<210> 4108
 <211> 154
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-B10
 <400> 4108

gtggctggca atcctgctcc ggctgaaaag aagaaaattc aacccccctc ccctcaaaa 60
 ggaaaaaagg aacctgttga aaacttaaac caagggcccc cttaagaaaa aaaagccaaa 120
 ggcaacaaaa aacggttaacc cgaatggcct ccta 154

<210> 4109
 <211> 395
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-B11

<400> 4109

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cataaactgt gttgtcacaa cacttccgcc taacgggtcca caaagggtacc tggatgacac 120
tttcccctcc tgttgccatg caacaccatg atcctgtgtg tgtgtaagaa attttttgaa 180
attactacgt tccccaaaca cactttttga gacacacaca catgaattgg gatttaataa 240
aatactccaa gtgcctcact taaatctttt gagctagaaa attttgctct agtgcttcac 300
ttataccttt agagcacggg ggtgggttta ttttatagaa attattgatc tctcatgctt 360
cacttatatt attctgagaa tcctcctaaa caaca 395

<210> 4110

<211> 435

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-B2

<400> 4110

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ggtgctctca cacctacctt caccttcccc cagcttgagt ccaccaccgc ggagaagggtg 120
atggtcagcg tcgaggcgat cgcggaaaaa gatgacgtcg ccaccacgga ggacgaactc 180
atgctgggtga gcgctgagtt ggagaagggt ctogggggca gcaacgtgcc gtcggcacgg 240
gtaagcttcg ccatgggcat cgattgcccc ctgcagggct tctacttgg tttcccagtg 300
tgcagcgaca ctgaatcatg gccagagaag ccaaacggcg gtggacgtcc tgcctcccc 360
cgttgattgt tcatgcggac acgcttcacg gaagagaagg gggccctagt tgccgtccag 420
gagagcgagg atggt 435

<210> 4111

<211> 61

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-B3

<400> 4111

cgggcaagat gaaaaggacg atgacgacga cgacggcgat gaagaagaag atgatgaaga 60
a 61

<210> 4112
<211> 464
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-051-Q1-E1-B4

<400> 4112

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caggcngcgg cgcaggacgc cgccaactcc tcctcctcct cgcgctccgc cttctccaac 180
cagctcctcg tgcccaggga ggcangacgg atgggtgtctc tgtcggcttg cgcgaagtcc 240
ggcgctgtca gctttgtggt tggcgctcgtg gttggcttca ccctgaataa aaggctgcgc 300
cgggtgggctg ccaagctgct caagagaatt aagggcgata actagcaaag ctagtgcat 360
taatcttgaa agaaatcttg ttggcaagtg tgctctagtt acatctgtag taactccaag 420
ttgaacctca ttgactgctt ggatcaactg tgatggatac aaca 464

<210> 4113
<211> 282
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-B5

<400> 4113

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aggacaacaa gcagagctag acgtgttcta acgcgggatg aggtgatacc ggtgaagggg 120
ggaaacatcc gggaaagtat ccccggtggt ccgtgttttc ggacagatga accggagggg 180
aaatgttgca ggttcactat ggtaaggatg cctggcgagc gaacaggctg cgtatctgga 240
ttcgtctctt cgttctgagc aaccttcagt taaaaacttt tt 282

<210> 4114

<211> 137
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-B7
 <400> 4114

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 tgctggaagc ctatcatcgg cccgcgtggc ctgggtgcgtt atcgggtccgt ttcagcattt 120
 tcttcgccgc gttctgt 137

<210> 4115
 <211> 475
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-B8
 <400> 4115

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 gcatgcacgt gtactccctc aatcttccaa caaagagtgt acatatacac ttccaatgca 120
 cttagccttt aatctaatacg atattgattg actaatgcac caacttgtgc tctagctata 180
 ggctacatgt ctatccttaa ttacaacatg caacaatctt catttaatct tcttctctca 240
 atggtegcat gcacacataa gtctgtact tttgggtgat aattatgcca tgaagtttca 300
 gttectcttg gtcaatgtgt aaatctctat atgtatagtc tttcatggac ggagggagta 360
 ggttgagcac ttgagcgtga gcgtgtgtgt tgcgccgtgt gctgtgtgcc gcatgtatgc 420
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<210> 4116
 <211> 177
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-051-Q1-E1-B9
 <400> 4116

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 ggaaattaag taaaagggtg taaccttttc cttccccgtt taaaacagtc ctggattgct 120

tcatatataaa aaanaaaaaaa aaaanaaaaaa aaaaaaaaag agcggccgct ccaaaaag 177

<210> 4117

<211> 285

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-C1

<400> 4117

cctcaaaaag tctgatctct gtgctcaggt gtcacccctg gatcagtaat gctaacacca 60

cacagtactt gaaggattta taacagagta gcaatcgac acttattaca tcgaatgtct 120

caaagagaac ttattacaat gaatatggct taaggccaac taataacgat aacagcggaa 180

ggcttggaag ataagcgagt ccatcaactc caacgacatc actgagtata gaaccatgac 240

caaaaaggaa ccttactcgt cgtctgaaaa gtctgcaaca tgaaa 285

<210> 4118

<211> 106

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-C10

<400> 4118

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gtttgaacct gttatgcacc ttggttaata tgcattgat ctggtt 106

<210> 4119

<211> 424

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-051-Q1-E1-C11

<400> 4119

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cgcgtggtga ctcatcactg attcccttcc aacatgggtt aataagaagc gtcgtaattt 120

ggaagtaact gacgtgtgcc cgggtgtgtc gtctgaaccc gaagacacat aacacgcctt 180

ccgcaggtcc ccacgagcag tangtctctg gcaagccatg gcgagcgact ggaggctccc 240
ggacgtccgc aagctgggtga atcctgnacc ggagtggctc ctgcacatcc ttggggacag 300
tacagagacn gaacggcttc acctgcttat gactctgtgg cgcagctggc atgtaaggaa 360
tgatatagtt caacataaac ggctccaac gttgagtcac cgaagcgctt ccttcatagc 420
tatg 424

<210> 4120
<211> 285
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-051-Q1-E1-C3
<400> 4120

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tgcggggcct accccagttc ttggagagcc catggacttg atgactgctc tgcagcttgt 180
gatgaagaag tcaagcgctc atgatggcct tgtcaaggga ctccgtgaag ctgcgaaagc 240
gattgaaaaa cgtgctgccc agatctgtgt gcttgctgag gactg 285

<210> 4121
<211> 476
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-051-Q1-E1-C6
<400> 4121

tccggggcca cggggacggc aaaaactggg aggttgacag ggagctgctg cagggtgccg 60
tcgcgccgcc gcagcagcgc gtgtttgcgg cgaccgagcc atcagatgct gtcgcgtcga 120
gctatctcgc gattctccag gtatgccaga gaactacatg ttcacattat ttgtgcgcag 180
gcggcgaact acatgtcatt ccccttgac tacgctctgg agctggagga gaagctgttg 240
gcgcgggacg cggagattgc cgcgctgcgg aagcagctgg aggagacgaa gggcgagctc 300
gccacggcga aggtgccgag gaggtagtca gganggtagc aggagagcga gacggaggac 360

atgngngcga ccgcggatct tttcttgctt cgctactctg taatccagtg atccgttcct 420
 ttgctatacg agactcgta actaagattc atcagtgagc aacaagaagg gaaaaa 476

<210> 4122
 <211> 333
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-D1
 <400> 4122

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 cgtacaagat ctacatcttc aagggtgctga cgcaggttca ccctcgacat cggcatctcc 120
 tccaaggcca tgtccatcat gaactccttc atcaacgaca tcttcgagaa gctcgccggc 180
 catgccgcca agctgggttc gtacaacaag atccccacca tcacgtcccc ggagattcac 240
 actcgtccg cctcgttctc ccccgggcag ctgcgaagc acgctgtctc ctccggccac 300
 agcgcgtca ccaactttac ctctcgta aag 333

<210> 4123
 <211> 481
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-051-Q1-E1-D10
 <400> 4123

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 gtgggcggcg ccgcgctgc gcacagaaca catcctcgcc agcgtagctt ctccggcgtc 120
 cggccaacgc gctcactagc ctgcgcctt cctccacatc tctcgctc caccatcc 180
 agttcgtgcc attcgtgct ccaagacaag ggcatggcg tcggcggctg cggcaacgaa 240
 gctgatggtg cagcagccaa ccatgaaggc agtagcacgg ggcagcgaca gcagcatgga 300
 gggcgctctc ttgtttggga aggtaatgga actgcaaata ggagtggcag cggcgaccag 360
 gatgcaaagc gaagtgggtc ccanagacct tggaaagaaa tggcacgtga gcanaggata 420
 tcaagaagct ttggatggt gggaagcttg gagctgatgc ttcanataag ctgatggtg 480
 t 481

<223> unsure at all n locations
<223> Clone ID: LIB103-051-Q1-E1-D4

<400> 4126

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cgagattgag gatgatgatg ctgacgatgg tgaggattct gtcaaggcgc aatcctcttc 180
gaagaggaag atgtctggcg cggaggatga agatgatgat gacggtgatg atgatggtga 240
tgatgatgag aagcctccat caaagcgata gtcaatttgt tcttgctgat ctggtatctt 300
ttctgcttgg gccaagaagg aaaataatcc tcaccganaa gggtgtttgg taaatgctgt 360
agctttagga catctgt 377

<210> 4127
<211> 309
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-D9

<400> 4127

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atgaagttga agatattcca gcagctgaac ccaccgctgc tgaagacatt ggtcatgatg 120
acaatgtagc cgatgatgaa gttcttcctt agatcgaaca ttacgtggta tcatcacctg 180
ttcatacgaa cagcgaactc atcagcattg gtctgtccact gacgccaatt gctcaggatg 240
catcgtgggc tgatcaccca caactacaag actccccag tactccccaa taacaacaac 300
aagctacac 309

<210> 4128
<211> 455
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-E10

<400> 4128

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gaggctcttg aggctgcccg tattgcttgc aataagtaca tgaccaagca tgcaggaaag 120
gatgccttcc acctcagggt cagggttcac ccgttccatg tgctccgtat caacaagatg 180
ctttcgtgtg ccggggctga taggctccag actggtatga ggggtgcttt tgggaagccg 240
caggagagtct gtgcccgtgt tgccattggg caggtcctcc tttctgtgcg gtgcaagccc 300
aacaatgcca tccatgccac tgaggccctt cgtcgtgcca agttcaagtt ccctggccgc 360
caaaagatca ttgagagcag gaagtggggc ttcaccaagt tcaaccgcaa cgactacctc 420
aagttcaaga gtgagggcag gatcttgcct gatgg 455

<210> 4129
<211> 388
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-051-Q1-E1-E11
<400> 4129

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cctgccgagt taagatcggg aggtaggagg agcttttggg ggggtgggaat ggcttccggc 120
gggaaccgc agttccggta cactcagcct ccatcgaagg tgatacacgt gaggaacctg 180
ccgtgggagt gcaccgacga ggagctgacc gagctgggca acctcttcgg caaggctcgtc 240
aacaccaagt gcaacgtcgg cgccaacagg aaccaggcgt tcatcgaatt cgctgaccaa 300
aatcatgcaa ttgctatgat atcatactat gcatcatcag cggagccagc acacgtaaga 360
tgcaagaatg tgtaccttca gtactcca 388

<210> 4130
<211> 456
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-051-Q1-E1-E12
<400> 4130

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aatccttaa agactcaatc cgataagata acttcaaagg gaaaactcaa tccattacaa 120
gacagtacag ggggagaatc atcataagat ccaactatga tagcaaagct cgcgatacat 180

caagatcgtg ccaaatacaag aacaccagag agagagagag agagatcaaa cacatagcta 240
 ctggtacata ccctcagccc tgtgggtgaa ctactccctc ctcgatcatgg agagcgccgg 300
 gatgatgaac atggccaccg gtgatggatc cccctccga cagggtgccg gaacaggggc 360
 ccgattgggtt ttgggtggcc atataggctt gggcgccgg aactcccgat ctacgtttct 420
 ttctgggggtt tctgtatcta taggaatttt tggcat 456

<210> 4131
 <211> 274
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-E9
 <400> 4131

aagcaaggag tgctaacttc tgggcgtgtc cgccttctgc ttcacagagg cacaccttgc 60
 ttccgtgggtt ttggcagggc taatgggtgag cgcacgagga agtccgtccg tgggtgcatt 120
 gtcagccaag acctatcagt tatcaacttg gtgattgtca agaacgggtga gaatgatctg 180
 ccaggcctta ccgacactga gaagcccagg atgaggggac ccaagaaggc ttccaagatc 240
 aagaagccct tcaaccttgg caaggatgat gatg 274

<210> 4132
 <211> 466
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-F1
 <400> 4132

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 ctctccgag actagcaggc ggcagtgatc ctctagcgac tctggcatgg tgaacgggta 120
 gcacgtctcg tacttgatgt tttctgcaa gggccagtag tgaccgctgc atgcatccgg 180
 aggtgatgca tgatgtctgt tggcgagccc ctaaaccggca tcgggcactc atagaagtag 240
 atgaagggct ccttgagggc atcgaccagg tcgtccatga aacaggagtg actgtagggg 300
 acgttgccgc agttgaatat atgagcacgt tactacaaga tttaatccaa ataagcacia 360
 aataaatcat gacggctata atagagatta aactaatcat gtggactaga atagtagatg 420

aatagataga atctagtagg atacagagta gaaacatgaa ttctat

466

<210> 4133

<211> 448

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-F10

<400> 4133

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aaggatactc ctttttcagg aagaagaaga aggtgatcat gggctttgcg gatgggtttcc 120

gtggcgaaag agtgaggacc ccgtctccta tcatgtatgt ccacgacgtg acccagcttg 180

cgcataatgg ttgccggctg cccaaaaagg taaggaagta agactgataa tatccccccag 240

caagtgtgga gatcaatatc ctgcctccaa gtagaagcac agaacgatat gtatgtatcg 300

actgggttcg taataatatc atcagcctga aagtatttat gaatacttat tagacaatct 360

tacatcggct tttgtaagtg ataaccattt tgtcatttcc cgtattgttg ctgaggtgat 420

ggatttgttt tgatttgacc tgattgca 448

<210> 4134

<211> 256

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-051-Q1-E1-F4

<400> 4134

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agcgggagaa gaaagaaaga aaggcagcag ctgaaaaaaaa aaaagatata atttttagatg 120

ctgccgttga gagcgaaggc gctgccggac atgctatcgc ggaaggaagc aagaagattg 180

tattggtgaa gcataagaag aaaattaagc atgccaaagt aacaagctgt tgtaccaacg 240

ctcataaatt ggtgac 256

<210> 4135

<211> 315

<212> DNA

<213> Triticum aestivum

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agcatccaat tcactttcta tgatagtttt tattataccc aacttggatg cccatcattc 120
taggacaaat tttataacca tagaaaatac catggctgtt ctgagagact ctcaaaataa 180
tataagtga gcatgagaga tcaacaatth ctacaaaatt aagccaccgc cgtgctctaa 240
aagatataag tgaagcacta gagcaaaact atctagctca aaagatataa gtgaagcaca 300
tagagtattc taataaattc caatcaagtg ggtttctccc aaaaggtgtg tacaacaagg 360
atgattgtgg taatctaaaa agcaaagact aatatcatac aagattctcc aagcaaaaca 420
catatcatgt ggcgaatana aatatagcaa caagtaaag 459

<210> 4138
<211> 451
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-G11

<400> 4138

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gaatcaccaa tgaggggaat ttaatcgacc ggaacaggac ctccaacgcc aagctgggtca 120
aagctgcagg ccaaggtgtc aagtcacagg aagcacctca ccattgatgc atgagctctg 180
aagctttttac cctggcctgg aactcctttt ggcttcaatg gttttcctgc tgagagcttc 240
atggctgata ttgcagtggc acgagttctt caggtgaaac tgtcactgat tacatctgaa 300
cccattgtaa tgttttgggt ggtactagct gtgcagatgg aaccagcaat gttatgtcgt 360
aacagtagta acaacgaact ggagcaagag tgatcgaggc gcgggtttct cgggaaatgg 420
ttcgatttca ggcattcaca cacacctttt g 451

<210> 4139
<211> 272
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-G12

<400> 4139

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aggaggctgc gcaccggatg aactaagttt agcattgttg aaccatatct attcctcatc 120

cttgagtatt gttcaagcat actgtggcag tttggctcca gttttggaag tcatttttgt 180
 ttgtctgaga catcttggtg agaacagtgt cagaatgaag tatttctggt taatgccagt 240
 tagtattttt gtcgaacaat cgaattaatc aa 272

<210> 4140
 <211> 392
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-G6
 <400> 4140

gggtccaaga cgacccttac tacaccggag gtgcctacta ctacgtgcag gctgacgacg 60
 accaggagta gttaggagga tcccaggcag gaggcttgcg cctctttcga tctgtatccc 120
 agtttgtgct agccatctta tggtaacttg ttaacttatg tttgtactca gatattgttg 180
 cttccgctga ctcgtaaatg attgagcact tgtattccga gccctcgagg cctgggcttg 240
 tattatgatg cttgtatgac ttatttattt gtagagttgt gttgtgatat cttcccgctga 300
 gtccctgata ttgatcgtac acatttgcgt gtatgattag tgtacgattg aatccggggc 360
 gttacagtta caaaggtacg tttcgggttt gt 392

<210> 4141
 <211> 467
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-051-Q1-E1-H1
 <400> 4141

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 actcaacaga gtttcgaagc tttgaacccc agggcagttg ccgtcgtgat tgaccccatc 180
 cagagtgtca aggggaaggt ggatcatgat gcatttcgtc tcattaaccc tcagaccatg 240
 atgcttgggc aggagccacg tcagacaaca tccaatgttg ggcacctgaa taagccgtct 300
 attcaggctc ttattcatgg gctcaataga cactactact ctattgcaat aaattaccgc 360
 aaaatgagc tggaggagaa gatgctgctc aaccttcaca aaaagaaatg gactgatgga 420

ttaattctga agaaatttga cgcacattca gaaaccaatg agcaaac

467

<210> 4142

<211> 115

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-H11

<400> 4142

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tattegcct ctctctctct ctctctctc cctccccatt tgcctctcct tcccg 115

<210> 4143

<211> 402

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-051-Q1-E1-H12

<400> 4143

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cagtttgctg aagcagatca agaagatgga ggtgtctcag cactccaagt acttctgtga 120

gttctgtggg aagtttgctg tgaagaggaa agcagttgga atttggggat gcaaggactg 180

tgggaagggt aaggctggcg gtgcttacac tatgaacact gccagtgcgg tcaactgtcag 240

gagcactatc cgtcgtttga gggagcagac tgaagcataa gttgctacta gtgttttgtc 300

ctagtgaatc atctgggatt tcgcagttta gacgatactt tggattcagt tccattggct 360

gtttagtcaa ggattatctt tgtacttggg gcgatgatgt tc 402

<210> 4144

<211> 451

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-051-Q1-E1-H3

<400> 4144

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ccgaccgagg tctcccggcg gcgggtattg tctcccggcc ggtcgtgctc aaggaagaca 120
gccgtgtgcc tcttcttggg acgctgctct gtgtgcctct tccagggaca ctgctccgtg 180
tgccccctcc cggaagctg ctcttgtgg tgctctgcc ctgtacgacg ctctccggct 240
gctgcttcga cccaagttcc gacaccatgt agctcgtcaa gattttgggc agctggagcc 300
atgctccatg gacgacgagg atgaccggga cccaagccc aagccaacga gcacgacgag 360
gtaatcgtcg agtccgggga actttgactc gactccccac aattagatgc aaatgcacgg 420
cagcgagaga ttgatgatgt cgacgtcgtt a 451

<210> 4145
<211> 394
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-051-Q1-E1-H4
<400> 4145

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agttttggaa tagtccaaca cgagtgtttt gaagctacat gagcttaagt acaacctaat 120
taaatttctt taaataccgc cacatcttga tgtagacatg cagattacct cccccaagct 180
taagcttttg caagcccaaa ccggcggaat cactgtggcg gttggtcaca agcccatcca 240
tggtccagtg tggagaagct tgaattcatg taggcggacg tgctcgaag ggacacgaca 300
aggttgctca tatcattgat ggagccctgc aaactgtaaa ggtccgcata ggtggtgtag 360
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<210> 4146
<211> 401
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-051-Q1-E1-H9
<400> 4146

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caaacctcct tcacgggggg ctttccccct ctcggcggcg gaaaacctcg gttaccggcc 120

caatggatga tgcattaaag taaggaagaa gaagcaagca gaacagaaga agagatgggc 180
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tcggaggtaa tgacgtcttt tctgcatgca ccagggactc gtcaagtcgg gcagttaccg 300
aggcagcatg gggaagcgga gatgcccacg tcccgtcagt cgccacgcgt caatcatgga 360
cgcatgccgt tggggcccgc ggcgctccgc acttgcccct t 401

<210> 4147
<211> 408
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-052-Q1-E1-A1
<400> 4147

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cacaagagtc ggcggaagca acaatatctc agtacagaca tgagttaaac aaggttgcct 120
taagaaggct agcacaaaag cagcaacgat cgaaaaggca aggcctcctg cctgggagcc 180
tcctaactac tccaaatcgt cagcggttgt cacgtagtag taggcacctc ccaggtagtg 240
gtagtcatca ctggcgctgt ctggctcctg ngatccgata tctgggtcgca acaatcgggt 300
atgggggaaa acaagtagca aagcaaccgt gagtgtcat ccaaagtact cgcaagactt 360
gcattagatc taaactaagt atgcatctgt atcaaaggaa tgggttgt 408

<210> 4148
<211> 471
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-052-Q1-E1-A2
<400> 4148

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aaaataagaa tgaagaatta aaaggttcca aaggcaaaaa aaattgggta accgccaaag 120
gaaatacaat ggtgggtttaa agacgatttt ttgaacctaa tgtggatata tacatatata 180
tggattatcc tcttcccaat anaatcgac ttgtcatatt cctatacaga atgtaggagt 240

atgattaagc agatgcagca gcgcattgag ttgtgtctag ccagatctcg tgcacagtac 300
 gtaggaccct ttcttatccc aaattaaaaa tttctgaaca tgctacacgt acctctctat 360
 cgacaacata aactgaagac acaaactctgg taatcaagaa ctttctccgc acaacagctt 420
 aaagcacaca catacacttg aaccaatcag gcaatcacgc atgaaacgac c 471

<210> 4149
 <211> 273
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-A3
 <400> 4149

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 atctacttga catatacatt gtggcacaaa ggcctcacta atcttaagaa tgcattacca 120
 aacacttata ccatcgacga cataatgcct gctgaaaaga aatgtgagtt cctgaactct 180
 ggtgattcaa acctatcaag ggccctttta cctccaaatc tgctcgcata ccaacttctt 240
 cgtccctgcc atccctggta tggtctaccg caa 273

<210> 4150
 <211> 152
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-A4
 <400> 4150

tttgggcat tggttggttg cgtgaccgga tacctgtcgt cgtctcaagc ttctttgtca 60
 acgttcgcca tctgccatgg tgctggggga tgaagtactt ctgggagagc ttgcggggcgt 120
 ccgaccttgt aagctacgcg ttgggctggc ag 152

<210> 4151
 <211> 358
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-A6
 <400> 4151

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 acttctggga caccttgctg gacgccgacc ttgagagcga cgcgttgggc tggcagtaca 180
 tctccgggtc tctgcctgat ggccgtgagc tcgaccgcat tgacaacccg cagtttgaag 240
 gctacaagtt cgacccatgc ggggagtacg tccggcgatg gctgccggag ctggcgaagg 300
 ctacaacgga atggatacac caccctggg atgcaccga gtctgtgctg cangtgc 358

<210> 4152

<211> 468

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-A7

<400> 4152

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 tgatattcat aacattcatc tccatcatca taatcttaac agcaatcgcc cacatgacag 120
 tccttgacat cttcgtctgc atcctcgctc tcatgccaac tggatggggc ttgcttctga 180
 ttgcccgaag gatcaagcct gtggctgaga tggctgggct gtgggggtct gtgaaggctc 240
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 cgtgggtccc cttcgtgtcc gagttccaga ccaggatgct cttcaaccag gcgttcagca 360
 gaggcctgca gatctcccg atcctcggcg gccacaagaa ggaccgagcc acccggaaca 420
 aggagtacgt agaaagaaga tcaaggctag ctcccgcgga ctttgttc 468

<210> 4153

<211> 477

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-A8

<400> 4153

gggcaaagt acaatgacat gtacctgaag gtcaagggtg acatgttcaa gatcagtatg 60
 gtcctcatgg agagtatcca caggccaag gctgaaaagg caagagagaa gaccctctct 120
 gaccagtttg aggccatccg cgccaatagc aatgcaagca tggagaggaa gattgccagg 180

agggatgaga tgattggctc aaggcccgag agatcatgca ccagcaccat cggctgcagc 240
tctcgctcag gcatcatctg cacctatgaa tgccatcaag tgaatgtctg ataagaagct 300
ttatctttct ggtaatatca cgggttatcc taattttgga atatcataaa ttcacaactg 360
ttttctgtgc aatatcatgt ttgtgtcatc gtgtctgac acttaaagat catatcctat 420
ttgttctgtt ggatgtatca atcagatatg cttatgcata gtctgttaaa cataaaa 477

<210> 4154

<211> 460

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-A9

<400> 4154

cggggtcacg ggcacatgta caatgacatg tacctgaagg tcaagggtaa catgttcaag 60
aacaagaggg tctcatgga gagtatccac aagtccaagg ctgagaaggc aagagagaag 120
accctctctg accagtttga ggccaagcgc gccaaagagca aggcaagcag ggagaggaag 180
attgccacga gggatgagag attggctcag ggcccgagag atcatgcacc accaccagcg 240
gctgcagctc ccgctcaggc agcagctgca cctaagaagg ccaagaagtg aacgtctgat 300
aagaagcttt atctttctgg taatatcaag ggtagccta attttggaac atcagaagtt 360
cagaactgtt ttctgtgcaa tatcttgttt gtgtcagcgt gtcggatacc ttaaatatca 420
tatcgtgttt gttctgttgg atgtctcaat cagagatgct 460

<210> 4155

<211> 421

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-052-Q1-E1-B1

<400> 4155

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ttcttttgca atcccaaatt ccggatgtgc cgggtcactg gtgactctat gggccaacaa 120
gctgtcctct cccgtgcaaa agcgggtcat aaggcttggt anggccgcca ttgtccttgg 180

cttttcttg cccgaggtgtc cggcgagcca ttctgtctcg atactatgct tgaaagccgc 240
taaggcctcg gcatccgggc aatcgacgat ttgattcttc ttagtgagaa atctgttcca 300
aagcttacgg gctgactctc cgggttggtg gattatgtga cttaaactcg ctgcatccgg 360
aggtcggaca taggtccctt gaaaatttgc cctgaaagca tcctcaagtt cctcccaact 420
t 421

<210> 4156
<211> 451
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-052-Q1-E1-B10
<400> 4156

ccggggccac ggggcagttt acacaggctc aggccacctt gtggtgtaat accctactac 60
tgctttgtgg tggattagcc tcgcgagggg ctgaggatga actagtacaa gtggaagaac 120
atcctcagga ggcgtgttct tgtgatgagc tctagggatt cgggtctccgg ggggtccgatc 180
cttctacggg tgtggctaga ctatatatat aatggccttg gtcctcttcc ttcgaaactt 240
aggcgggaag ggatcccaca acggccaaat ttgaaagga acaagaagta catataatct 300
tgacgaaagg cggctcttgc ctacaaagcc ttgagcgtg acctcgtggt gggatcggcg 360
atgacatcta tcctgccgtt ctggcgggtc tgggcccctt tccaggcaaa tggcaacctt 420
tggtgatctt cttggggctc aacacctgcg c 451

<210> 4157
<211> 463
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-052-Q1-E1-B11
<400> 4157

ccggggtcac gagattgtca tcctggggcc cgtatttcta cacaatatgt tcccctttga 60
gaggttcatg ggagtcctaa agaaatatgt ccgtaaccgc gctaggccag aaggaagcat 120
ctccatgggc catcaaatag aggatgttat cgggttttgt gttgacttca ttcttggcct 180
taacaagaca ggtctcccta aatcgcggtg tgagggggaga ctgactggaa aaggcactcg 240

gaagagactc aataatatgc agggacggat attattggtc tcaagcacac tacacagttc 300
 tacagaactc taccttgggtg acccgtatg tcgatgaaca caagaacagt ctgcgctcca 360
 aacacccgga gcagtgcgac gactggatta catgtgaaca catcaggact ttcagcagtt 420
 ggttggaac acgtctcaga ggtgacaaca ctgtttgtga tga 463

<210> 4158
 <211> 389
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-B3
 <400> 4158

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 aacatgcttt gcaacaactt taattcaatc ctcaaacaaa ttaaagggaaggatcaat 120
 tgttttccat ttatagccca gtaggaaata acacgcaagg tacaaccaac acaatcacca 180
 ctttgaacct ttcaactctt ctgagcctca aaaagggtgtc atgggtttga tgatgtcctc 240
 atccaagcga tgcaaattat ttgtagagaa tgcatattag taaataaaaa gaaattccaa 300
 agcagaaaac accaagcttg ctaggatatt tgtcactcaa ggcatcattt tttcatgcaa 360
 aagatataaa ggtccaatgt ccaataaca 389

<210> 4159
 <211> 414
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-B4
 <400> 4159

aagtttgaat ccgaaaaccc gttcgggtcc cctccgggaa ccgttgctaa accttgggtcc 60
 taaaagccga accctgggtac cccaaacaac taataataag ccgcaattag gtgttcggg 120
 tacaagttgt tgccatgttg tgtcgggcgc atccgcacat gtttaaagtt cccggatttg 180
 atatccgtgg ttgtagatat tctaagcact tgtacttggg atatatgccg gggcaagtat 240
 ttttgggtaca agatgattag aatgcgccag tacgtgtccg gatacaagtt gtggttgtct 300
 tgtgccaagg cgcgtcactg ccttttgaag gcccgattt gttgttcgtg gctgtagatg 360

ctttgagaac atggtacagg tacatatgcc cacgcagttg ttcttgaaac atga 414

<210> 4160
 <211> 455
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-B5
 <400> 4160

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 aatctttgac agacatagcg atgtccatgt tactcttcct gctcccttcc tttttgatta 120
 ccaggcaaaa aggaagatac gttgttacca gggaggaaac agctgaacac aaggagagag 180
 cagaggcggc tcaccaacat tcaaaatcaa ttctcaagat ctggctacga attattagca 240
 cgaacgctaa ccctagttag attattagca aaaaaaatat ttgtagagaa caaataattg 300
 atcactaatc atagaccgat accattcaaa caatcaatac actacataga tctgacgaat 360
 cttactccga tttcatggat tgggagaaca taaccatatg attttttattc cagaaaaatg 420
 anaatggggg ggggggtgact aaccggtttt ccgtc 455

<210> 4161
 <211> 204
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-B6
 <400> 4161

cattgggtaa taagtatgaa aagttcgatc atgatgcatt aatcttgcac acagatagag 60
 tcgtataatt tactcgtgtg gatttattcg ttatcggctc gtatgcatat ttgcttagta 120
 gtgtttgttt tagacgatgt tgtgttgtaa gtaccatatg tgtttatggt cattaagaat 180
 catgggtaat atgtatgatt tggc 204

<210> 4162
 <211> 497
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-B7

<400> 4162

tgcccggggc cacgggatca tgggaacgac aaccgcaatg acctgtaaaa acatagaaca 60
tcctattaac tgaaacatgc ttgcactaac ttttaattcag tcgtcaaaca aattaaaggg 120
aaaggggatca attgttttcc atttatagcc cagtaggaaa taacacgcaa ggtacaacca 180
acacaatcac cactttgaac ctttcaactc ttctcagcct caaaaagggtg tcatgggtttt 240
gatgatgtcc tcatccaagc gatgcaaatt atttgtagag aatgcatatt agtaaataaa 300
aagaaattcc aaagcagaaa acaccaagct tgctaggata tttgtcactc aaggcatcat 360
tttttcatgc aaaagatata aaggccaat gtccaataac aactcaacct tatttatattt 420
tcagaatcct ttgatacaca ctataagttg ccgaacaaaa tctttgagca tgcacagctg 480
gcataaaaaa ttgatatt 497

<210> 4163

<211> 466

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-052-Q1-E1-B9

<400> 4163

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taaatatattg tctttctaga gatttcaaca agtgactaca tacggagcaa aatgagtga 120
tctacactct aaaatatgtc tatatacatc tgtatgtgat agtccatctg aaatctctaa 180
aaagacaaat atttaggaac gaagggagta tatatcatca aaagatcgaa cgaataccaa 240
cttcatgatt acttataaca agacttctcc catgtcctca agaacaaaag taactactca 300
caaatcatat tcatgttcaa gatcagaggg gtattgaata tcattaagga tcttaacata 360
taatcttcca ccanataaac caactagtat caactacaag atgtaattaa cactactagc 420
aaccaatagg taacaatctg aggttttggg acaaagattg aataca 466

<210> 4164

<211> 215

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-C1

<400> 4164

cccatttgcc gggaattgca agcccaacca acgttttggg gcccaaccag gaagaagggtg 60
agacaccaac accaaaaaacc tgggtcaaac cttgggtttg cccaagggg ccattcaacc 120
aaaccaaacc ttgggttccc cccgtttcca atttttcccc caaaaaaacc ggaacctttc 180
caatccaatt tcaatcccaa tccaaagggt ccccc 215

<210> 4165

<211> 450

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-C10

<400> 4165

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gcatgcgcga gaacagagca tgacaagagt caataagatg tcaattgatt cagataactc 120
tggtgacaga cgaattgtga tcaaactact agttacatac ttccaacgga atcacagcaa 180
agagggtattg gatcttatgg ttcgcatgct tggcttctcc gaagaggaca agcaaagaat 240
tggttctgca cagagcaatg ttggtaagggt tggtgtccgc ggtgttatgt gtcttcctgg 300
gcgtctagtt ggaggatttg ttagtggaag ttcagcacga aaatctagac atgcaccgca 360
tgataaccat tcctttgcag atcactgggt ggactttctc actcacggag acagatgaca 420
gggagaatca gtaagcttcg gaagccgctg 450

<210> 4166

<211> 459

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-052-Q1-E1-C11

<400> 4166

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aaaagataag gaagcgaatg catcgtacga tgagccaaag cggcacatag ttctttctgg 120

gaagagaaac atcgtgggag tggatgacaa gacagacatg tcaggagatt atgaaaagtt 180
 tgatgaaatt gctccattca cagtgaatat tgacccgagc atccagttaa atgatgaaga 240
 ttttccatgg ctacggcgca aaggggacaca cgccaagaaa aagtttcaca cccaagatc 300
 tgggatgtga tcggcttcac tatcatcact ttcttctgtg ttntcacacc aggagggaac 360
 ccttgtaata gttagggtag ctagttagtg gttttggcat tttgtacgcg aataaatttt 420
 aggtgcaagc aaattctttc aagcatttaa tgatttttt 459

<210> 4167
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-C12
 <400> 4167

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 tcggcgctcg ggcaatcgac aatctgggtc tttttaatga ggaacctagt ccagaatttt 120
 cgggaggact ctccgggctg ctggacaata tgactgaggt catcagcatc tggaggccga 180
 atgtagggtc cttggaagtt ttctctaaag gcactctcca gatcttccca gctaccgata 240
 gagttttctg ggaggctatt taaccagtgt cgagctggcc ccttaagttt taggggaggt 300
 atttgatgga gtgtagatcg tcaccgcgag ccatgtgaat gtggagaaga aaatattcag 360
 tccatactac gggatctgtt gtgccatcat atgattcaat gttcacgggt ttaaaaccct 420
 tctgggaact ggtgctccat tacctcatc 449

<210> 4168
 <211> 325
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-C2
 <400> 4168

gtcataggtc atttagtggt ggtaggctgt gtaatacaaa agaagcagca gaagattgaa 60
 aacatcattc tgtgagctgc atgtatgtga tgattttgtg accatcagga ttgattttctt 120
 ttattaagtg gctcatcaga tgtttgagaa aatggccata agaggattga tgaaacttga 180

```
aagaggttgt ggtatttcta gcacgttgag aggataactc gtgacagggt tcacgtgaag 240
tgggaaagac ccaccatgac ctgcgagtta atggtttttg gggtaacgct tttcccagcc 300
ccaggtaa atcatgagggc tacct 325
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<210>      4169
<211>      408
<212>      DNA
<213>      Triticum aestivum

<223>      Clone ID: LIB103-052-Q1-E1-C3

<400>      4169
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<210>      4170
<211>      441
<212>      DNA
<213>      Triticum aestivum

<223>      unsure at all n locations
<223>      Clone ID: LIB103-052-Q1-E1-C4

<400>      4170
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cctaaaaaga aacgaactgt a

441

<210> 4171
 <211> 473
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-C8
 <400> 4171

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 cggc aaactt caccttctcc gcatctgtgc atcatgctgt ggtcaactct ctagctgtct 120
 tgcggagcca atcatctgct aatatcggat ctgtgctact ggaaaacacc ggcggattca 180
 gcctaagaaa acgggctaag tgatcaacag gtgggtgggg tggtggggtg ttgttgttgt 240
 tgttgttgtt cccctgggtc tgattctgga ctagaaactg catcaatgtg ttctgctgct 300
 agatcaactg ggtgagctcc agtggaaatg taaatctggg gtcacgtctc ggaggcatct 360
 gagggtttag aaaagatgag atgtaagaat acatggggtc taaggagaaa aactacgca 420
 tatgcacatg aggcaacagc aaacaattca cttcatttaa atcaacaagg gca 473

<210> 4172
 <211> 463
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-C9
 <400> 4172

tcccggggtc acggggagga gaggaggatg cagtaccagt cgcacatccg agggctcaac 60
 gcgtacgata gccacaagaa gttcatgaag gattatgttc agttttatgg ccatgagaaa 120
 aatgtggata acagtctgcc catcaaaact gataaagata cattgagaga aggatacagg 180
 ttattcttta ccgaggaaga tgacatggat tcaacttggg agaagaggct ggtcaaactg 240
 tactatgaca agctttttta agagtattgc attgctgaca tgaccagta taaaaaagc 300
 aagattggat tgagatggag aacagaaaaa gaagtgatat ctggcaaagg gcaatttatc 360
 tgtggcaata ggcatgtgta tgaaaaacat gggctaggta gttatgaggt gaatttttct 420
 tatgttgaag caggggagca gaaacaagca ctagtgaagc tgg 463

<210> 4173
 <211> 454
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-052-Q1-E1-D12

 <400> 4173

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acagacttgt cgctccttag atcatgtatg tatcatctgc ttctatggag agcctatggc  120
ctatgtgaat aaatgctttg attggcattg taatatcttc tgtttggtctc tatttgtaa  180
taatgatggc aagcaaaaaa agacatttta atggattcac atgggtgtgt tattctggag  240
caggttgatc atgctgccct gttaaaattt ggtaaaccct attttttaa atagaaattc  300
aatttaaagg ggtaccaag ctaaataagg cctcataaat catagtatag aaaaggcggg  360
gctggcta ataaatgaaag gatttcgaac cacaatcttt gctaattcga caacgattgc  420
attctttaat tatttctcaa tttttactac ttaa                                454
  
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<210> 4174
 <211> 408
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-D3

 <400> 4174

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cacgggattt cagcgatcat cggaagatta catcgaatag atctccacaa gagaggggga   60
gaacattgta ttgagatcca aaaagagaga ataagccatc tagctaataa ctatggaccc  120
gaagggtctga agtaaaactac tcacacttca tcggagaggc tatggtgttg atgtagaagc  180
cctctatggg agatgccctc tccggcagag ctccggaaca ggcccctaga tgggatctcg  240
tggatacaga aagttgcggc ggtggaatta ggtttttggg ttcgtaaattg atctgacggg  300
ggtacgtang tatatatagg aggaaggagt acgtcggtag agcaacaggg ggcccacgaa  360
gcaagggggc gcaccctcca ccctcgtgac ctccacgggt gttccttg                                408
  
```

<210> 4175

<211> 284
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-D5

<400> 4175

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 gcacatacac atttacttgg aactgcacgt acctagggca catatgtagg tatagtggag 120
 tcatacggaa catcttcggg gttcatggag ttttgaagca attccttttc tccagattag 180
 cccttgtgac tgcgaacgcg tcaactgggaa attatgtctc cagacattcc atataataag 240
 atacaaccct gtgatagacc ccactttctc tataagctta agtc 284

<210> 4176
 <211> 469
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-D7

<400> 4176

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 acctcgcgcc gccgcacccc gtccggggcca ccatccataa ggagaccaag ttctggggag 120
 acaagaagag gttcgggacc gaggccatct acgggtccgc cttcaacatc cgcaaggatc 180
 tggacgcaca aatcctctcc aggttccaaa ggccccagg tgcattgccca tcatcgatgc 240
 taggatatga ggcaatgaca gggttccttg atgatttttg atttgaagat taccttaact 300
 tgccccagga ctctgacagc ctgcgcatac cggacatgca ccacgggatg gaggttcggc 360
 ttggcctgtc gaaggggcct gtctgcccc gcttcagttg attccttcca cccatgtatt 420
 tgtcttgtgc ttcccgcca gcatctatgg cagtttcatg gattggtga 469

<210> 4177
 <211> 484
 <212> DNA
 <213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-D8

<400> 4177

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 ctgaacattg tagattatat cctattccaa ctacttgggc tgctttgaaa accgctatgc 120
 gtacgcgttg ggttccacca tattatcaac gtgaattgct tcaaaaattg cagcgtttaa 180
 gacaaggaaa aaattctgta gaagaatatt atcaggaatt acaaactggc atgattcgat 240
 gtggtatcgt tgaggagaat gaagctatgc ttgcacgttt tctgggtgga ttaaataagag 300
 agattcagac cattctagac tataaggagt atactaatat cactcgttta ttccatcttg 360
 cttgtaaagc tgaacgtgaa gtgcaggatc gacaagcatt ggccggaact aacttttctg 420
 caggccgacc ttctcatgg acgcccgtg catcttctac ttcaactgca ccagcacctc 480
 aatc 484

<210> 4178
 <211> 414
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-E1

 <400> 4178

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 aaagtaccac cagtgccatc ctctttggcg gacaccttct tagtctcagc ggagctgtca 120
 ttgtcttctt gcacttgccg gtggagctcg atggtgcgtc ctgcacggta gcgcagcact 180
 ccgaagaggt gcgcttgccg gagtgggcat cagagctctt gccggacttg gtattcttct 240
 tccccccggg agcttcagcg gcaagtgtcc ttgttctgc tgcggctgct gcttcncggt 300
 agatcttgtc ggcacagata agagcatcct tcttgctgcc agggacagag atgacactta 360
 ttgggcctgg cattttcagt atgttgtacg catagtgaga ggctgccatg aact 414

<210> 4179
 <211> 328
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-E3

 <400> 4179

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 tcctcatatt acatttatat tgttggcaaa accaaagaaa ggaattggca acaaaacacc 120
 gaggattacc ctccaagaaa caaaccaagc gccgacgtca gcggcgccgc cccaagtctc 180
 gccaaagcaa aagcgggtgac accggcacag gagataatag cactccggac agtgccgaag 240
 acgacaacaa tcccctacag caagatttag agcangagga tggagaagcc agccctccc 300
 agagagcggc agatggagaa gcggaggc 328

<210> 4180
 <211> 465
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-E6
 <400> 4180

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 caatcgacaa tctggttctt tttaatgagg aacctagtc agaattttcg ggcgactct 120
 ccgggtgct ggacaatatg actgaggtca tcagcatctg gaggccgaat gtaggtgcct 180
 tggaagtttt ctctaaaggc atcctccaga tcttcccagc taccgataga gttttctggg 240
 aggctattta accagtgtcg agctggcccc ttaagtttta ggggaggtat ttgatggagt 300
 gtagatcgtc accgcgagcc atgtgaatgt ggagaagaaa atattcagtc catactacgg 360
 gatctgttgt gccatcatat gattcaatgt tcacgggttt anaacccttc tgggaactgg 420
 tgctecatta cctcatcagt gaagcatang ggggtgtgcgg tgcct 465

<210> 4181
 <211> 477
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-E8
 <400> 4181

ggggccacgg ggcgtcttac tcaacattaa gtagttgaga cacgtgttga gcgataattt 60
 gctgaatcgt gcatggcatg ctacgtcggt gtcgctggac gtgtagttta gagaaagaac 120

ccatttcata tatagaatag atagtgaac aaactagtag gaaaaaaga aatggcaaag 180
aagcatacca gtctaacc agcgtcaggt atttcacctt ggacgagcct atattcatac 240
atgacccagt cggtccttgt acccttgggc gccttgccag cgtgaaacac cagggtcctc 300
ttcatcccaa cagtgcgatt ttcatacacc acctgcctgt cctttccagt agccttccag 360
tagccacctt cggttgaacg gttagctcta tgcccaacag agtactttct gccacgggtg 420
canaagaagt aactggaga tcccggtcgg cattgacgat ttcgctgaag caagttg 477

<210> 4182
<211> 246
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-E9

<400> 4182

ggggcaactt atagtaaata atattattac tagacatgtt aacagataat ctactgatac 60
tagcatggta tgaatatgtc atgcctctga acatctacat taaaaacctt acacattaca 120
cacaaaaaat ttacagtttg gcaatctact tagtattgga caaagagtta ttcattatat 180
cttcacatac gacgatcatg tacccaatat tggcggatct aatcttcata catgaagtac 240
tctgtc 246

<210> 4183
<211> 462
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-F1

<400> 4183

gtccacggga ccgatcgac atttaggtga gaccgaaatg ttacgaaggg aaactgagag 60
tttgcaatcc catctcgggt agaccgagat cccatcgggt gagactgaac tgattaggggt 120
ttctagctat ggctatgtca agtgaactcg gtggcgccgg atgaatcaaa tcagtgaggg 180
tgagtttgac tttaggttta ggacatgttt ggaattgaga aagtggctga gggttttgga 240
gcatactact aagcattttg agcaagtaga tcattaagca agacctcatc gccttttaat 300
agtattggct ttctatgga ctcaatgtga tcttggatca ctaagataga aatgaagagg 360

cttgagcttt tgctaataatt tgtccttagc attttgaggg ttccacatct ctagtccatg 420
ccatagcaac catttgaact ttctgaaata atcaacttga aa 462

<210> 4184
<211> 459
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-F12

<400> 4184

ttccccggggt caccgccgta ttatcatgga ctgtcttcat tgttttgatg cttgttttta 60
ctgcatcacg gctttctatt gccatcccta atttcggatg tgccctgggtca ctggtgactc 120
tatggggccaa ccagctgtcc tctcccggtgc aaaagcgggt cataaggctt gttagggccg 180
ccattgtcct tggcttttct tggccgaggt gtccggcgag ccattcgtct cggatactat 240
gcttgaaagc cgctaaggcc tcggcatccg ggcaatcgac gatttgattc ttcttagtga 300
gaaatctgtt ccaaagctta cgggctgact ctccgggttg ttggattatg tgacttaaata 360
cgtctgcac cggaggtcgg acataggtcc cttgaaaatt tgccctgaaa gcacacctca 420
gttcctccca acttccaatt gagttttcgg tgaggcttt 459

<210> 4185
<211> 464
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-052-Q1-E1-F3

<400> 4185

ccctagctca ttctgataca accccctct ctcgtctctg ctctcttgta ctgtattagg 60
acaccaacga ttcatctgtt acttggtgcg gtagttgaac tccttatcct ctgcatgacc 120
tgtcattgcc acagtaaata gatgaaaccc actagcatga gtaggagttg tttgagccct 180
aatgtgccta ctcatctatg cttgtttgtc atgocctgcta ttgcatagaa ttgtgtcggg 240
tctgattcat cagggatgaa tcggaggtgt gtgaacatgt cctactgttg agagctaagt 300
gtgtgaacat gatttggtaa aggtatcgat gagacgccat gtangagtac atggtgggtt 360
gtttcattga agccgtcctt aggaactgag ttctatgttt gtgatccatg aaacagctac 420

tatcacácat tgggccctga aatatgaccc cgctcgactt actg

464

<210> 4186
<211> 479
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-052-Q1-E1-F4

<400> 4186

ggggcttgcg tgagtttcca acctgacaaa caacttgaag ggccgtcctc gcagatccaa 60
cctgcagaag gtggatctgc agaagctgaa gatgaatacg acttcttgaa ggatggcaag 120
aagcaggctg aaggcagact acagagggtca ttagctcgtg tgaaatcaat gactcaatac 180
ccagaagcaa gagaacaata cagtaggctg caagcctgtg ttacagaact acaagagtcc 240
aaggcgatac aggataagat gctaagcgat gcagctggcg gcgatggagg tgatttcattg 300
gttgatctgg aggatttctg cgcggtatgag ctgttagaca caccgatgtc cactattttg 360
tgacgttgat gggctttttac tagaccagtt angctgtgac ttgttcgttt taccagacta 420
gttgtaaatt cctgtgctag atgttcactg ctcaacattt gactcagtat agctaatac 479

<210> 4187
<211> 465
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-F5

<400> 4187

ctccaatgca taacttccaa togettcctt tttgaaaaag ttttttaggtt cccatctata 60
ttttatgttt ctaaccttta taaaagcact caacagaaat aaatgactct ctaaaacttc 120
cgggttgctc ccctggcagc actttcttta acgccattaa acgaggcata aagtgtttaa 180
gtaatggatc cacctatatc ctaagggtata tcaaagccta ttttaattag cattgggttg 240
gcatttagta atgagaacaa agcaacatat agcatgcaat gacgaatgtc taactctctt 300
tctatgcac ggcatgtcat aaaagaacaa ttaatgcaca tcaagtaaag gctactacac 360
aacataggca gtttcttgca atttaatcgt gttggaaaca caacgagggt gtcatatggg 420

tectctctca taataattac aagtaggagc agcaagcaca tgcac 465

<210> 4188
<211> 271
<212> DNA
<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-F9

<400> 4188

ttcccggggt cacggggaga tctcaaaact gctggcatac ttggaaagcc tgggtgggggt 60
tcaacatgtc cgtgcgattc atcttcatct aagttcatgc tccgcggtac gggtaccaac 120
gttacctccc ttgccaatgca cttcattctc atctccgaac ttccaatttg acttctctccc 180
gaacctttta agcaatccag tttttactag gatatcagag attacgatcg ctatgctatct 240
tagtaaacac atgtatcaca ttctttcgaa c 271

<210> 4189
<211> 347
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-052-Q1-E1-G1

<400> 4189

ggggctaccg tgatgatcat cggggcagag attctagaag gcgaagtcng agtccggatt 60
ggaaataaat atggacgtaa caggtacaga gaaaggggaac atcatcgctc tagcaagagt 120
cgtagcacta gtcctgatga ttacaagagg cgtggcagag acagaagtcc tagtcgtagc 180
aggagccgca gctacagtcc tgatgatgac aggaaggggtg gcagagacag tttgtcgccc 240
gcacgcagaa gcactagtcg ctcccctcgc aagacaccac ctccctcgaa gacaccacct 300
ccttgcgagg ngctctctgc taagcgcaat gatgaccgtt ctccctg 347

<210> 4190
<211> 485
<212> DNA
<213> Triticum aestivum

<223> unsure at all n locations
<223> Clone ID: LIB103-052-Q1-E1-G3

<400> 4190

ttcaaggggc cacgggatgt tggctaccac atgctcctcg atgatctcat cggatgaacc 60
acgatgtcaa ggattcaagc aaccccgat acaattccct ttgtcaatcg gtatgttact 120
tgcccgggat ctgatcgttg gtatcccaat tgtcacagcc ccagatcagc ccttgtttgt 180
ttttgcttta gcatccatgc aacatgttta aattttatga aatttgaaat ggggattgct 240
caaaccctag cattaaagga attcactagg ttcacctaaa atactttcaa gtaagtccaa 300
atggccttca aaaatgttca tgatttttga caaagggtan aaacctctaa caaaaatgat 360
gccaatatct ttgggcatta tggattttga ataaccaata tgtatttgaa ttggggcatt 420
taaatacaat taatattttt aaatgctcca acaattctga aaatagttaa gggcctctgt 480
aataa 485

<210> 4191

<211> 383

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-G4

<400> 4191

gggccgatcg tgatcgcgga gaccaacaac ctgagtcac tggatcaagc ccttggttagg 60
tctgggcggt tgcaccgtca cattcagatt cattatccaa atgttgatgg ccgacaggag 120
atccttgacg ctcatatgtc aaagggtgtg aataccaacg atgtggatct tctgccccgt 180
ccttaaaacc tattgcaatt cacataatat ctaatttgtg agttctgcat tatctaccat 240
caaccgatgt cactgatgat taccctcaac cttgtcaatc ttatcttatt tccattaatg 300
tctgtcatgc tctacccaaa acgtgaaaaa cctctaccaa caatgatgcc aatatttttg 360
gaccaatatg gatttttgcc act 383

<210> 4192

<211> 490

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-052-Q1-E1-G8

<400> 4192

tccgacattc ccgggggccac tggcaataag tatatgagtt ctttatgact aatgttgagt 60
ccatggatta tacacactct cacccttcca tccttgtag cctcttcggt accgtgcatt 120
gccctttctc acattgagag ttggcgccaa cttcgccggt gcatccaaac cccgtgatat 180
gatacgctct ttcacacata aacctcctta tatcttcctc aaaacagcca ccatacctac 240
ctattatggc atttccatag ccattccgag atatattgcc atgcaacttt ccaccattcc 300
gttcatcatg acacattcat cattgtcata ttgctagcat gatcatgtag ttgacatcgt 360
atttgtggca aagccaccat tcgtaattct ttcatacatg tcactcttga ttcattgcct 420
atcccgttac accgccagag gcattcatat agagtcatat tttgttctaa gtatcgagtt 480
gttgagttgt 490

<210> 4193
<211> 366
<212> DNA
<213> Triticum aestivum
<223> unsure at all n locations
<223> Clone ID: LIB103-052-Q1-E1-G9
<400> 4193

gtacaggtec gacnatccgg gtccacgggg gagctacaag gggcccaacta ggggtgggggg 60
ctcagtaaatt cgtgtaagca cactccctgc cttctatcct tgacattctc gacgggtattg 120
ttcaattacc tttcccacag tggctactta gcgcgaactt cctctgtgca tcgatatacc 180
gtgataggat acacactttc atacaggaca ctgattatat gttccgcatt gcatcaagta 240
gacttaccta tgatcgatt tcgaaagcga gtcttagaaa tattgccatg cacctttcaa 300
cgtgtcattc aaactatata cactcatcat tggcatacta ctgacatcat catatagtag 360
atatct 366

<210> 4194
<211> 440
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-052-Q1-E1-H12
<400> 4194

tttaccgggg aggccacgag cgtccagtag acgggcacgg tgcacggcgc cttctccaca 60

ggggagatgg cggcggagga gtgccggatg agggtcctgg agaagttcag ggagctggac 120
 atgctggaga tgtgccaccc gatggccgag caaacggcca cegtctccgt cccgctgctc 180
 atctcccggc tgtaaacagt cgtcccctaa actacctacc tattgtcgcg gcagggttcgc 240
 cggccgttca ttccagtgat tgctcggaga aggcagcgtg ggagcaatct atccttgctc 300
 ttctctgtgg catgaggcgt gtggctcgtg gacctgtgg tttgctgaat aaaattactg 360
 ctgggtaata aaagattgtg ggcgtctggt atgtatactg tcagcgtgat gcggggggtt 420
 gtgtttggta aggcgttatg 440

<210> 4195
 <211> 372
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-H2
 <400> 4195

atataattca tattcacata gctaataat taaatccaga gtcccaaaaa taaatcctta 60
 aaaatgttca atatttgggt tgggaccaga acccttacca taaattatca aacatttacg 120
 aggagcattt tggagcaatg aatgagattt ttagggtttt ttcccttctt ttaattaagt 180
 tttttttagg cttccaaaat tctcagttc aggtttcaac aatttaaaca tgatgctcag 240
 atgaggtcta gcctagtgc taacaggacc atggatgtga cacttttatg gacgatggaa 300
 taacgagtgg caagagccta agcttgggga tgcccatggc accccaagat agtcacgaat 360
 aggcaaaagc ct 372

<210> 4196
 <211> 431
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-H3
 <400> 4196

ggtccacggg ccgaaggtag gatactccg tgatctgcac acattcagct cgatgacatc 60
 ccatgaactc tagatctagc tgaggctcgcg ggagagttaa attagcacga cggcgtggcg 120

acggtgatga agaagttagc ggcgcagggc ttgcgctaag cactacgacg atatgaccaa 180
 ggtgtgtaac tgtggagggg ggcaccgcac acggctaaaa taattgtctg ttgtgcgttc 240
 tanggtgccc cctgctgaaa gtgcaatcat gcccttaatc atattttgat gttgatgaca 300
 acatgcatgt tgggactaat catgtttatc aagtatatct caagattatg tctcaagggc 360
 cgtgtgtgga tcatgactac ggacataaaa catatatata catatatcac tcgagagcaa 420
 agaccaagac a 431

<210> 4197
 <211> 449
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-H4
 <400> 4197

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 tcaggtgcaa aatgtgctaa acagatttga agaggccatg gaaaagatag atggcatgga 120
 gaagacgttc gaaacacagc tcaataacaa gtttaatgaa ttgctcgtgc gtcttccacc 180
 accaccaccg gctggaccta acgcacctct actactacaa caacaacaac aacgacaaca 240
 acgatgatga ttacctccac gtcccgaac agccctccgc cgagttagcc gtctccctct 300
 tgcgcctgac caaactgttg gtgctgctgt tgatacttct gtggctcctg ctgctgatgc 360
 cgangacgat gatthttgcgg gagattacca cgatgatgtt gataaaatta gaactacgtg 420
 caagcaccag gaacacaacc accaggtca 449

<210> 4198
 <211> 394
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-052-Q1-E1-H6
 <400> 4198

tcccgggtgc acggggactt ctgatcggtc cgatgataat atgcagtctc cattaccaat 60
 agctcgtctg ctcggtccgc gcgtctgggt gcttgtagt cctagtagta gtagcgggtga 120
 tacatgtttg ctgggtgctc cacaatgttt ttacttactg ttatttcgct gtctcttatt 180

ggatgatgtac tgatgtattg taatgaatca aggtattgct tctgaataaa aaaaaaaaaa 240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
 aacccaaaaa ataaaaaaat aaatcaaaaa aaagggggccc cctcaaaagt ttcaagctta 360
 attaaccctt aaagccaatt taaacccttt ccaa 394

<210> 4199
 <211> 383
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-052-Q1-E1-H8
 <400> 4199

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 tattgaaatt gatcccagta ttgtgcatga agttatagaa ggtatantgg gaacactacc 120
 tcaacanaag gggcctcatc ataccagga acaaacgcaa gtttttgaga aaatttgcca 180
 agtaacgaaa attttacaaa aatctcttga acctcttaag ggtgttagtg gaaatcttca 240
 ccgcatgaat atgttgatta ccctttgcaa taagcgggtg gatgctttag atctaaaaat 300
 ttctgaatat gaagggaac gtaaagaacc tcccggattc gagcatgatt ccgctaaaaa 360
 attgaaaacc gaagatggca ata 383

<210> 4200
 <211> 335
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-053-Q1-E1-A1
 <400> 4200

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 aaggaggccg gcggcgaggg gaagcagcgg ggcaggaaga agggcagcaa ggccaagaag 120
 ggcgtggaga cgtacaagat ctacatcttc aagggtgtca agcaggtgca ccccgacttg 180
 ggcattctct ccaaggccat gtccatcatg aactccttca tcaacgacat cttcgaaaag 240
 ctgcgccgaa aatccgcaa gctggcaagg tacaacaaga agcccaccat cacgtcccgg 300

gagatccaga cctccgtccg cctcgtcctc cccgg

335

<210> 4201

<211> 311

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-A10

<400> 4201

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catgcaacag ggatgaagaa ctggctgccca attatctttt ggatcatggc catgagtttg 120

aggaacaaca atagatgtta gattggtctt gctgttgaaa gacagaagag tcagtgcacag 180

aagcatttca gtttggtgtc gttcttatat gttgctgctg aatatcactg ctacttgcca 240

ttagtgccctt gttgctgact ttcaatttct tgtatcctgg aaatgcttcc taagtacata 300

atatcatatg c 311

<210> 4202

<211> 427

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-A11

<400> 4202

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atgggtgctt atgaaattga atctatgttt aaagagtttg atgatattga tgatgcttgt 120

tatagatctg aaaatttagc taccctcaaa tattgctatg agaattatga atagaattat 180

gaaattaatg cacttattaa gaaagtctcc gctgtccaag aagagactaa tattttgcag 240

gaatctatga aagaagaagt tgatgacact gtgagctcat tggatgaaaa agatgaggag 300

gagagcgaag aacaaaagga ggaagagcgg attgatcacc cgtgcgcacc ttctaattgag 360

agtaactctt caactcatac attgtttaat tccccttctg gcttaccgaa ggatgattgc 420

tatgatg 427

<210> 4203

<211> 386

<212> DNA

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acgcacgaca tatagacatc agcgtattga atgcataagt cacaatttag gcaatcttca 120
caagatccca tgtcatatac atcatcaatt gggatataac atacttggcc tacactcgcc 180
atgtcaatca agtgcataga taacattaca tcatgcaaac tctcattgct cgaccatagt 240
gccaaagtcta tgagagaacc catcatgcga cacggtctcg atcaccacca attgggcagc 300
actactgatc atcacgaagt taaacatagt aatgttg 337

<210> 4206
<211> 449
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-053-Q1-E1-A7
<400> 4206

gggaagcaca agaacaggaa gcaagctgcc ccccccccc ctcctcatct ccgactcact 60
cacgatccga gatcaggatg gccggatcga tggaaactcc taccaagggc ggcttcagct 120
tcgacctgtg ccgcaggaac gccatgctgg agaagaatgg cctcaagatg cccgggttca 180
ggaagaccgg gactaccatc gtcggcctcg tgtttgcgga tggagttgtt cttggcgcag 240
acacaagggc aaccgagggt cctatagttg ctgataagaa ctgcgagaaa attcatttta 300
tggcaccaaa catatatgtc tgtgggtgctg gaactgctgc tgacacatag gctgtgacag 360
atatggtcag ctcccatcta caacttcacc gttatgctac tagccgtgag tcaagagttg 420
taaccgctct tacactactg aagacacac 449

<210> 4207
<211> 407
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-053-Q1-E1-B1
<400> 4207

ccaaggccga caaccggctg ccggcgggga agtccgccgc caaggaggtc ggcgacacca 60
tgggcaacat caacgctaag aagagcgtgg agacgtacat catctacagc atcaagggtc 120
tgaagcaggt tcaccccgac atcggtatct cctccagtgc catgtccatc atgaactcct 180

tcatcaacga catcttccat aacctcgccg gctagggccg caagcttgcg cgggtacaaca 240
 agaatcccac catcacgtcc cgggagatcc agacctccgt ccgcctcgtc ctcaccggtg 300
 agctcgccaa gcacgcgctc tccgacggca ccaacgccgt caccaagttc acctcctcgt 360
 acagtgtctc tgctcctgtg tctcctagtt agctgtccag gtgtgtt 407

<210> 4208
 <211> 377
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-053-Q1-E1-B11
 <400> 4208

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 aattcctaca aatccaagcc ttgggacaag cccgccagac cgagtcgcta gactttgctg 120
 aaagaaatgg cgccccgagg ctccgtagaa agagaagaga agtggtgttg tatcgccaat 180
 ttttcgaaat ataccgtctg ctgttccttt ttttcccgcc ttgttgctcc tttttttcac 240
 cttgttgttt gactagacgg ctcgaaatag acagaactct tgatcggggc ctgtatttaa 300
 ttgtgagatt ctttgtagcg cagccggagt agtagaacat gttgccgttt ttcgcagcat 360
 ttttcgcagc anaaaaa 377

<210> 4209
 <211> 315
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-053-Q1-E1-B3
 <400> 4209

gaatgaatcc aatgtgagaa gagcccttgt gatcatgcac cagagggacg aagtggagta 60
 caagagggag cgccatgtga ttgtccgcaa ggcttgagct gaacctaaat gatggaacta 120
 ccatggaaac cctctggcca tctgatgtgt gtgtataagt agtgctgaca ctgcagcctg 180
 tttcctgagg aaatttggtg cgtcgttgaa attgaattgt acttgtaacta ctttaagctg 240
 tagctgtagc cctaaattat cttgtgtcta actgaagatg ttccacactt aagttcaatc 300
 catgattgca acatt 315

<210> 4210
 <211> 253
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-B7

 <400> 4210

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 actcacatac ttcatgagca cagtcagcaa cttacgtcga tcgtcgccat agctacattt 120
 cacaatatac atcgtcggca ccatttcatt acacaggcct caattcctaa ccaaagcaac 180
 ttgaccacca tttcttgtcc tacctcccct tcttccccgg ttcaaattga aagttcagga 240
 agattaaggc ttc 253

<210> 4211
 <211> 437
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-B9

 <400> 4211

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 ttcacagcaa gatcagcacc caaagccaac aatctgaaac atattttgtc acagataaga 120
 tatgttgctg attgtcttaa tgatataagt ttacaatcag aagccgttat acagaaaaca 180
 aacaagtatt attggagcct ggatgatgac atcgaaggaa tttctgcttt gagcaatgca 240
 ggccatgaag aacaacaact ataaagactt gccacaaaga aattgttcta aacatccaac 300
 gatacatgtg tctaacatag ctctttctat ctacatgcct tgctcataat attgtaaatg 360
 atcgttcgta agcttattag aaaacatgta tcatcagcaa ccatttatct atcagcaatt 420
 cataacttatt tccaaaa 437

<210> 4212
 <211> 359
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-C1

<400> 4212
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 cttgccctga ggggaaaggg tgccgtagca caagcaaaga tagcaaatca gctttacctg 180
 aagaaattct ctggcccgag gtgggaggct ttggtgaaga agggagccaa gaagcagagg 240
 ttgttggtgg catccaccag cgtgaagaac cgggcttact tggacactct ttacgtcgat 300
 tctctcatcg gacctgacac cgtctctacg atgcccagacc aacctctgga cgcgttcat 359

<210> 4213
 <211> 436
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-053-Q1-E1-C10
 <400> 4213

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 atttgttgaa ttatattcat catgagacag tcataaccta gggcgatatg gcactagctc 120
 cagttcacia atataatgta ggcattctatt tcgtaaatag tcatacgtgc ttatggaaag 180
 aacttgcatg acatgttttg tctaccctc ccgtggtagc ggggtccaat tggaaactaa 240
 gggatattaa ggcctccttt taatagagag ccggaacaaa gcattaacac acggtgaata 300
 catgaactcc tcaaactacg gtcattaccg ggagtgggcc cgactattgt cactctgggg 360
 ttgccggatt ataacacgta gtangtgact ataacttgca agatcagatc tagaacatag 420
 atatagtggt gataac 436

<210> 4214
 <211> 418
 <212> DNA
 <213> Triticum aestivum
 <223> unsure at all n locations
 <223> Clone ID: LIB103-053-Q1-E1-C11
 <400> 4214

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ctttcgacct atggcaccgg gagggtgttt gcactactga acctcgtggg accaagtggg 120
cagctacacc tgtgttctga tctggccctc cgttacagct tgcagaatgg attaataagg 180
gccaggactg gggatctatt gatgaagtgc agacgctaca aagccgcatt cggagcctca 240
ttgaaaagga caccgggtctc atcaacgtaa tccaagtaat gctagtcctg cgggtcctac 300
cgtgccagca acagcctctt cgcatgtggg agttcaatcc ggaagggaca tgaacccttc 360
agcatttctc cggcacgacg ctanaggaa tgcggaaatt attcttcggg acacgaaa 418

<210> 4215
<211> 362
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-053-Q1-E1-C3
<400> 4215

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gatggaggag tttgatatag aggagagcaa cgacgtggcg agagttgcgg ctgcatctgg 120
atgagatatt tatgctctc atcgattgat tgattattgg cacacataat aagtcagata 180
gccctgaagg gcttggtgta ccctatatgt ccctatcctt gttttaggc gttagatggg 240
gagttttgcc ctgtataata tacacgtcac cataactgat aagcctaaat tatactgtat 300
tgtataagca tctgatttac attcaccact tcttgtggg accattgtta caagagataa 360
ag 362

<210> 4216
<211> 366
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-053-Q1-E1-C5
<400> 4216

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caggtgtcgg cgtcccgggt actatcacgc catcatecca ggggacagcc tcgtctgtgc 120
gccgcgacca cctagcgcgg atgacctaca ttcgggaacg tgccgtcacc acgtggacga 180
cgaatcgagt agcatttctg ccagttgca ggtgcatgct atagaggccg ttacgcacca 240

tgtaacggac cttcaaacgc aggaggtgtc gtgattaagc tcctcatcag tgctcctcgt 300
gogatcgctc tagcgccagc tcctatcgca ttcacgctt cctctctcgc cacattctcc 360
agcttt 366

<210> 4217
<211> 320
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-053-Q1-E1-C7
<400> 4217

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ataacaactg tagatgcaca actctggcaa ttcgagatct tttcttttgc ctgcatggca 120
caaactatat gagtcaccag ccgctctttc cacttcaatt gtactatttt attgtaccaa 180
atgttagcta atgcaatctc cattccggat agaaaaaaaa aaaaatgtta caaacaacaa 240
aacaagcaa aaaatcaaaa tgaaagtta aacatgtatg gaattataag taaaaaatca 300
taaaaagaaa aaaacgggaa 320

<210> 4218
<211> 370
<212> DNA
<213> Triticum aestivum
<223> Clone ID: LIB103-053-Q1-E1-C9
<400> 4218

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gaaatgggca ccaaggtaca ctgttcattc cctctgaagg aagaatccat gtagtaccta 120
gcattcattt ttagatgcta tgtatctttc tgattgtttg ggtagtagag agctatttat 180
ctgtaaacad ctgcagtaga gagctatgta tctgtaaaca ttaaattattg ttgcatcaaa 240
gagcattatc acctccttgt cattgtcaaa aagtatgaca gttcagtata tgggttacaa 300
gcttacggca tcgacttaca atacagacca cgtgcattct cgtacattca tccattatca 360
atgctgagca 370

<210> 4219
 <211> 322
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-D1

 <400> 4219

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 ggaaaggctc atcgccaagg aggctgcgca gaggatgaac taagcctagc cttatatgtg 120
 agagcatatg ccatgtagtt tccctttcag tgtgtcctga ttttgacgag gaactcgaac 180
 ccttttagca gcagtgtgga atcgtattgt gggtttctga atctctgttc ccttctccag 240
 acttatgcaa agattagatg aggtttaccc atgtttggat tcacaaaaaa aaaacaaacg 300
 ccgcaaaaaa aaaaaacggg cg 322

<210> 4220
 <211> 427
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-D10

 <400> 4220

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 gctatTTTTTg ctggaatcgg ggcagcacia aggtacatc gaacactgcc ggcgatgaag 120
 acgacgacct gcggtgctgc atccagcgag ttgtttgctg gaaccggccg gcgaaaaagt 180
 tgcattcaca ccgaccctg ctggaattcg acgaccagga aagtcgtttt gctggaaccg 240
 gccttttTgt ttgtacaac cggcaaattt tttgtgtctt cggcaaggtg tttcattgtg 300
 acagtctgcg gcgaagtatt ttggcaggaa ccggtgatgt gttttgttgg aactgtattc 360
 cctttttgct actaccggtg acagtgcctt tttgttgcg aattttgttt tgtcttttgc 420
 tggaaca 427

<210> 4221
 <211> 398
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-D11

<400> 4221

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tatatccttt tagagcacgg tgggtggttt attttataga aattattgat gtatcatgct 120
tcaacttatat aattttgaga gtcttataga acagcatggg aattttcttt ggctataaaa 180
ttagtcctaa tatgataggc atccaagatg ggtataataa aaactttcat aaaaagtgca 240
tcaaatacta tgagaagttt ggtacatgat gattgttttg agatatgaag atggtgatat 300
tagagtcatg ctagttgagt agttgggaat tttagaaata cttgtgttga agttggtgat 360
tcccgtagca tgcacgtatg gtgaaccgtt atgtgatg 398

<210> 4222

<211> 439

<212> DNA

<213> Triticum aestivum

<223> unsure at all n locations

<223> Clone ID: LIB103-053-Q1-E1-D12

<400> 4222

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agtgctgacg gtggcagggc cagaccggcg gccgccggag acgtcgtcgg gcggagcaac 120
tgccggctgt ttgggttctc cctgactgat cagaagggtc tgggaggagc angtgaggggt 180
gatgccaaagg aaggggacgc ggatgatgtg gtggcggagt gcgccgaccc gcgggtgctc 240
gacttgtttg ggcgcggcca ccctgctccc ggcgctctgc atgccatcgt cgccgctccc 300
ctggggatgt gatggtgctg ctcaagtgcg tacgtttag tatcggacaa ttggttttcc 360
gttggttgaa gacggacgcc atctgtaatc tctcanctag gccactctta aattctagca 420
attaaatcta ctctacttg 439

<210> 4223

<211> 209

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-D3

<400> 4223

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 tttctccttg ttttagagta tcgcagaaaa ggaaaaccaa acggactcca attgacctga 120
 aacttgacgg agcttatattt tggaccagaa gaaggccacg gagtcaaaga gttggggccag 180
 aagagtccgg gctgcccacg aagggtgggg 209

<210> 4224
 <211> 336
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-053-Q1-E1-D5
 <400> 4224

ggggacaggg taccgccggt tcgacgaatg gataaaggcc tcgactccgg cgagtgtga 60
 cgggtggcaag gccagaccgg cggccgcctg agacgtcctc tggcggatca actgccggct 120
 gtttgggttc gccctgactg atcagaaggt gctgggagga gcatgtgagg gtgatgccaa 180
 cgaatgcgac gcggatgatg tgggtggcgga gtgcgccgag ccgcgggtgc tcgacttggt 240
 tgggcgcggc caccctgtct ccggcactct acatgccatc ttcgccgtct tcctggggat 300
 gtgatggtgc tacgcagttg cgtaagtcgt actatc 336

<210> 4225
 <211> 432
 <212> DNA
 <213> Triticum aestivum
 <223> Clone ID: LIB103-053-Q1-E1-D9
 <400> 4225

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 gctcatgaga ttttctattg agttttgtgt tgtgaagttt tcaagttttg ggtaaagatt 180
 tgatggatta tggaacaagg agtggcaaga gcctaagctc ggggatgccc aaggcacccc 240
 aaggtaaaat tcaaggacaa ccaaaatctt aagcttgggg atgcttggag cgtcttgtat 300
 gatttgagtc tttgcttttt gtttaccaca gtcatatattg ttgtacacac cttttgagag 360
 agacacacat gattcaaaat ttattacaat actctatgtg cttcacttat atcttttgag 420

ctatatagtt tt

432

<210> 4226

<211> 444

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-E10

<400> 4226

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tctcgtatga ccgaacctg agggaggcgt tgtggccatc ccttgacgag gctcgcacca 180
agatcttgag catctgggac caggcagaca ttgtcaaggt cagcgaggtc gagcttgagt 240
ttttgactgg catcaactcg gtggaggacg atgttgccat gaagctgtgg cgccctacct 300
ccaagctcat gcttgctact cttggagatc aaggatgcaa gtactatacc aaggatttcc 360
gtggaactgt cccatcctac aaggtagcgc aagtcgatac gacagggtgt ggtgatgcat 420
ttattggttc tctgctccga aaaa 444

<210> 4227

<211> 430

<212> DNA

<213> Triticum aestivum

<223> Clone ID: LIB103-053-Q1-E1-E11

<400> 4227

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tggtgaacta tcatgcttca ctttattatt ttgagagtct ttaaacaaca tggtaatttg 120
cttatgttat gaatttagtc ctaatatgat gggcatccaa gagggatata ataaaaactt 180
tcatctaaag agcattgaat atatgagaag tttgattcat tgcatttggt ttgagatata 240
aagatgggtga tattggagtc atgctgggtga gtaattgtgg attggtataa atacttgtgt 300
taaagtttgt gattcccgta acatgcacgt atgggtgaacg gttatgtgat gaagtcggag 360
agtgatttat ttacttttat tgtcttctt atgagtggcc gtcgggaaca cgatgggtctt 420
ttcctaccaa 430

<210> 4228
 <211> 432
 <212> DNA
 <213> Triticum aestivum

 <223> unsure at all n locations
 <223> Clone ID: LIB103-053-Q1-E1-E9

 <400> 4228

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 agatcacgcg gcatcagcaa gcaaggagct ggcttaaaaa gctccggcct gatggctttg 180
 agtaaacggt acagccccga cgagcacacg gcgagcggca tgggtactgag attgtccaca 240
 cgtgaaacaa tgagcttgat tacctctgtg gggagtgaat tccagccact ctttcggcgg 300
 gcgctgctcg gttctgccat tgtagtgct tgggtttcag tcgaggggga ggcgccttag 360
 cggggatgga agagcggaca aagatggaga agtgaatatg tgctgcggga agtggacagg 420
 tgatgatgac ta 432

<210> 4229
 <211> 427
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-F12

 <400> 4229

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 caatgataac cccgaacacc gtcaagcgag tccggagcac cctgcaacat gatcgtcagg 180
 ctogacaaga gctcaattag caatccggcc tcctccccag cccattcag gtggcatttg 240
 tgccacgcgt acacaactac gactcaaaa taccatgggc ataggtggag gcaagtagac 300
 aatacggcct acattgcggt tcagccgcca cgaggccgc ataccggtt tctttctttc 360
 aggaccctac ttttgggcag ccccttcaga gaactggacc atcggactaa tcacaggagg 420
 gaaacac 427

<210> 4230
 <211> 416
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-G12

 <400> 4230

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ccggcatcga aagccactgc tactgatgtg ctcccggccg ttattaaccc agcgaatgtg   180
gcctcaccag cagcggccga catgacacca gtgcctaacg agaagaaccc agttgtcgct   240
accagtactg tcacaattgg agtagctgct tgatecgatt acccgatcct cggagctacc   300
catggataac aacctgactg tgcttgcaaa ccacgtgaga catcctcggt ccaatgtact   360
gatcatcatt cgtggcgtct cgaaatcggg tctgataatt aggtttccct agctct      416
  
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<210> 4231
 <211> 432
 <212> DNA
 <213> Triticum aestivum

 <223> Clone ID: LIB103-053-Q1-E1-G9

 <400> 4231

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tcttcgataa tgcatatgtt ctgagcattt cccttcaatt ccatccacaa gacgagaaac   180
actttctcca ttctcaaag actcggttaag gattgttgga tgcaaagtag tatcatttaa   240
acgatcagac atatttgaat tttgttcagc atgaatccaa aaacgtgggg gtaaaaaaca   300
catagaggca tatatgacca actatcgata gcagaacttt taaaatgcac catggcatag   360
tatgtgttac tttcggacat tagaataagg tttgtcagtg tagcattaca tgtagtcaag   420
tacagacttt ac                                     432
  
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<210> 4232
 <211> 372
 <212> DNA
 <213> Triticum aestivum